COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS BILL, 2020

June 3, 2019.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. Serrano, from the Committee on Appropriations, submitted the following

REPORT

together with

MINORITY VIEWS

[To accompany H.R. 3055]

The Committee on Appropriations submits the following report in explanation of the accompanying bill making appropriations for Commerce, Justice, Science, and Related Agencies for the fiscal year ending September 30, 2020, and for other purposes.

INDEX TO BILL AND REPORT

	Page Ni	umber
	Bill	Report
Title I—Department of Commerce	2	7
Title II—Department of Justice	24	43
Title III—Science	70	82
Office of Science and Technology Policy	70	82
National Space Council	71	82
National Aeronautics and Space Administration	71	83
National Science Foundation	79	95
Title IV—Related Agencies	83	101
Commission on Civil Rights	83	101
Equal Employment Opportunity Commission	84	101
International Trade Commission	85	102
Legal Services Corporation	85	102
Marine Mammal Commission	87	103
Office of the United States Trade Representative	87	103
State Justice Institute	88	104
Title V—General Provisions	88	104
House of Representatives Reporting Requirements		107
Minority Views		153
36–473		

year into fiscal year 2019. This foresight proved vital during the longest partial government shutdown in U.S. history as the Census Bureau was able to maintain 2020 Census operations uninterrupted throughout the continuing resolution and the funding lapse. While the Committee recognizes there is prior-year funding available, the Administration's assumption that approximately \$1.02 billion of this funding will remain available to offset fiscal year 2020 costs is disingenuous and appears to rely on the assumption that Congress will supplement its budget needs when it becomes evident the President's request is inadequate. The Committee does not intend to put the 2020 Census at risk during the most critical year

of its operation.

The Committee includes half of the proposed carryover back into the base budget for 2020 response operations and Information Technology (IT) infrastructure requirements. Further, the Committee provides a total of \$496,265,000 for the program management of the 2020 Census and encourages the Census to expeditiously hire current vacancies highlighted by GAO to ensure proper oversight of the IT systems conducting the 2020 Census. The Committee rejects the Administration's proposed \$30,764,000 reduction to the Census Survey and Engineering activities, which is needed to manage the continued delivery of systems needed to meet 2020 performance and scalability requirements. Additionally, the Committee restores the "Secretarial Contingency" originally submitted by the Secretary of Commerce in 2017 as part of the updated 2020 Census lifecycle cost estimate. The Committee believes having adequate contingency funding for many of the unknown variables that the Census Bureau will likely encounter throughout the remainder of calendar year 2019 and into 2020 will enable Census to address emergent concerns quickly and without additional congressional action. To that end, the Committee recommendation also includes an additional \$220,000,000 above the request to its risk-based contingency and a \$500,000,000 increase from its requested amount for non-response follow-up activities to ensure that the Census Bureau can employ an aggressive follow-up strategy if the self-response rate drops lower than anticipated or the amount for which it has budgeted for.

As the Census Bureau prepares for its inaugural year with an online decennial portal, the Committee recognizes that the Bureau may be more susceptible to cyberattacks by nefarious actors who may wish to undermine the 2020 Decennial Census statistics or interfere with participant self-response. The recommendation includes an additional \$253,000,000 in contingency funds for Census IT infrastructure consistent with the Department's 2017 lifecycle cost estimate. The Committee understands that the Census Bureau is actively working with the Cyber Infrastructure Security Agency (CISA) under the Department of Homeland Security as well as private stakeholders who specialize in cyber security. The Committee directs the Bureau to brief the Committee quarterly on actions taken to protect the security of the online platform as well as personal data beginning no later than 30 days after enactment of this

 Act .

While the Committee remains hopeful that individuals will elect to self-respond to the decennial survey, the 2020 Census faces many hurdles with hard-to-reach communities. The Committee has previously directed the Bureau to prioritize a strong engagement strategy with partners and trusted voices in the community. The Committee recommends the Census Bureau take steps to develop the Mobile Response Initiative as described in the Bureau's report to the Committee on increasing the number of temporary Census offices and partnership staff to support the 2020 Census. The Committee supports such initiatives and encourages the Census Bureau to concentrate its efforts in hard to count communities and work with State, local, and tribal partners to identify locations for the Mobile Response Initiative to target. To that end, the Committee provides an additional \$100,000,000 above the request towards these efforts.

An additional challenge the Census Bureau faces is public perception of its intended use of the data it collects. In January 2019, the Census released the 2020 Census Barriers. Attitudes. and Motivators Study (CBAMS) Focus Group Final Report that provides a summary of feedback among individuals who are at risk of low self-response, including but not limited to racial and ethnic minorities. The report concluded that many of these participants felt they were politically targeted and conveyed a palpable fear that the government would use their census information against them. Many participants have an overwhelmingly negative perception of the citizenship question itself, which strongly affects their willingness to participate. The Committee stresses the importance of non-response follow-up fieldwork to ensure every person is counted, especially those historically inclined to not respond or difficult to identify and locate, including those with limited access to internet or broadband infrastructure. The Committee directs the Census Bureau to continue its outreach and collaboration with community partner advocates to ensure the most accurate count possible.

The Committee recognizes the Census Bureau's efforts to increase language assistance for the 2020 Census by more than doubling the amount of languages supported both through telephonic support and in its advertising materials as compared to 2010. Additionally, in 2020 the Census Bureau will include 59 non-English languages, including braille, to its language guides. The Census Bureau is encouraged to continue establishing key partnerships and hire those with language skills outside of those languages cov-

ered through telephonic support for the 2020 Census.

The Committee remains concerned that the 2020 Census is a Government Accountability Office (GAO) high-risk area as Census Day approaches, with GAO recommendations remaining open to: (1) ensure key innovations will function as planned; (2) strengthen the management and oversight of all IT programs, systems, and contractors supporting the decennial; (3) better address its cybersecurity weaknesses identified by the Department of Homeland Security (DHS); and (4) refine reliable cost estimates. To aid the Committee in its oversight function, the Bureau shall continue its quarterly updates to the Committee on the status of implementing GAO recommendations regarding the 2020 Census.

American Community Survey.—The data that the American Community Survey (ACS) collects is critical for communities nationwide as it is the only source of annual data on education, employment, income, housing costs, veterans' issues, and a host of other topics. The recommendation includes \$218,000,000 for this ef-

H. R. 1158

One Hundred Sixteenth Congress of the United States of America

AT THE FIRST SESSION

Begun and held at the City of Washington on Thursday, the third day of January, two thousand and nineteen

An Act

Making consolidated appropriations for the fiscal year ending September 30, 2020, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Consolidated Appropriations Act, 2020".

SEC. 2. TABLE OF CONTENTS.

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Sec. 1. Short title.
Sec. 2. Table of contents.
Sec. 3. References.
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Sec. 4. Explanatory statement.
Sec. 5. Statement of appropriations.
Sec. 6. Availability of funds.

DIVISION A—DEPARTMENT OF DEFENSE APPROPRIATIONS ACT, 2020

Title I—Military Personnel
Title II—Operation and Maintenance
Title III—Procurement
Title IV—Research, Development, Test and Evaluation
Title V—Revolving and Management Funds
Title VI—Other Department of Defense Programs
Title VII—Related Agencies
Title VIII—General Provisions
Title IX—Overseas Contingency Operations
Title X—Natural Disaster Relief

DIVISION B—COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS ACT, 2020

Title I—Department of Commerce Title II—Department of Justice Title III—Science Title IV—Related Agencies Title V—General Provisions

DIVISION C—FINANCIAL SERVICES AND GENERAL GOVERNMENT APPROPRIATIONS ACT, 2020

Title I—Department of the Treasury
Title II—Executive Office of the President and Funds Appropriated to the President
Title III—The Judiciary
Title IV—District of Columbia
Title V—Independent Agencies
Title VI—General Provisions—This Act
Title VII—General Provisions—Government-wide
Title VIII—General Provisions—District of Columbia

DIVISION D—DEPARTMENT OF HOMELAND SECURITY APPROPRIATIONS

ACT, 2020 $\label{thm:continuous} \textbf{Title I--Departmental Management, Operations, Intelligence, and Oversight} \\$

H. R. 1158—72

BUREAU OF THE CENSUS

CURRENT SURVEYS AND PROGRAMS

For necessary expenses for collecting, compiling, analyzing, preparing, and publishing statistics, provided for by law, \$274,000,000: *Provided*, That, from amounts provided herein, funds may be used for promotion, outreach, and marketing activities.

PERIODIC CENSUSES AND PROGRAMS

(INCLUDING TRANSFER OF FUNDS)

For necessary expenses for collecting, compiling, analyzing, preparing, and publishing statistics for periodic censuses and programs provided for by law, \$7,284,319,000, to remain available until September 30, 2021: *Provided*, That, from amounts provided herein, funds may be used for promotion, outreach, and marketing activities: *Provided further*, That within the amounts appropriated, \$3,556,000 shall be transferred to the "Office of Inspector General" account for activities associated with carrying out investigations and audits related to the Bureau of the Census: *Provided further*, That of the amount provided under this heading, \$2,500,000,000 is designated by the Congress as being for the 2020 Census pursuant to section 251(b)(2)(G) of the Balanced Budget and Emergency Deficit Control Act of 1985.

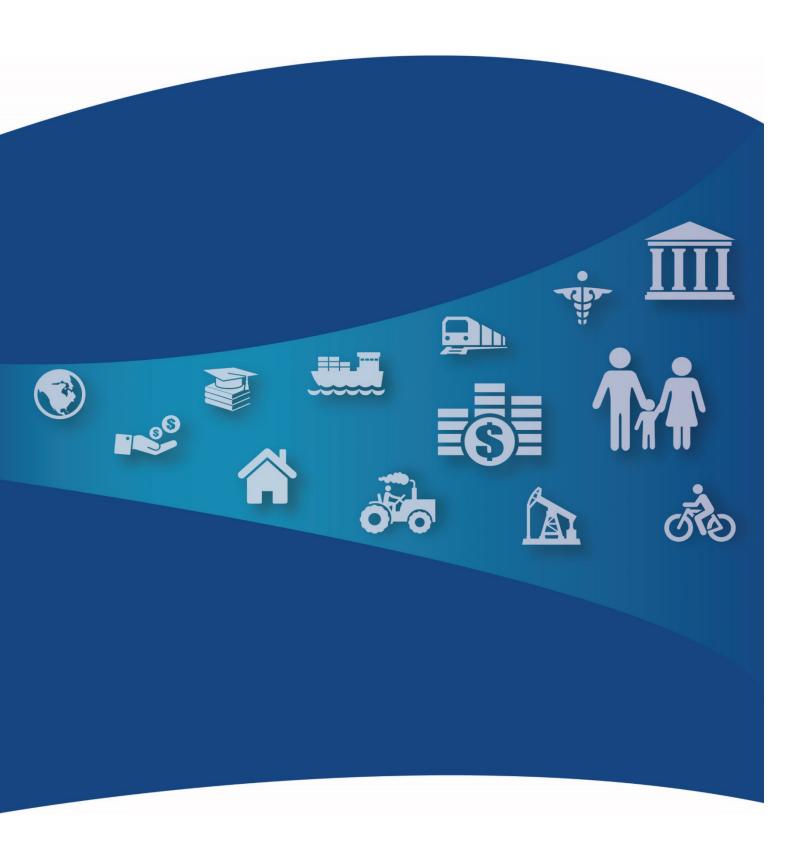
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

SALARIES AND EXPENSES

For necessary expenses, as provided for by law, of the National Telecommunications and Information Administration (NTIA), \$40,441,000, to remain available until September 30, 2021: Provided, That, notwithstanding 31 U.S.C. 1535(d), the Secretary of Commerce shall charge Federal agencies for costs incurred in spectrum management, analysis, operations, and related services, and such fees shall be retained and used as offsetting collections for costs of such spectrum services, to remain available until expended: Provided further, That the Secretary of Commerce is authorized to retain and use as offsetting collections all funds transferred, or previously transferred, from other Government agencies for all costs incurred in telecommunications research, engineering, and related activities by the Institute for Telecommunication Sciences of NTIA, in furtherance of its assigned functions under this paragraph, and such funds received from other Government agencies shall remain available until expended.

PUBLIC TELECOMMUNICATIONS FACILITIES, PLANNING AND CONSTRUCTION

For the administration of prior-year grants, recoveries and unobligated balances of funds previously appropriated are available for the administration of all open grants until their expiration.





1. Introduction

The U.S. Census Bureau is the primary source of statistical information about the nation's population and economy, and is responsible for the decennial census of population and housing conducted once every ten years. The Census Bureau will conduct the next decennial census in the year 2020. Federal law requires the Census Bureau to deliver to the President state-level population counts and the calculations for reapportioning the U.S. House of Representatives by the end of 2020. Three months later, on March 31, 2021, the Census Bureau must deliver a more detailed count to the states for redistricting purposes, as specified by Public Law 94-171.

The goal of the 2020 Census is to count everyone once, only once, and in the right place. The Census Bureau's experience conducting previous decennial censuses indicates that an effective integrated communications program is critical to its success. That is, communications and partnerships are crucial in educating the public and maximizing survey response rates. To support the national headcount in 2020, the Census Bureau is planning a communications program—the 2020 Census Integrated Partnership and Communications (IPC) Program—to increase awareness of and participation in this constitutionally mandated activity.

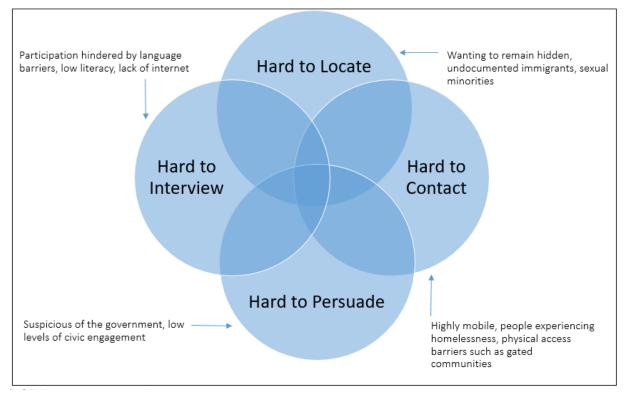
The 2020 Census IPC Program includes all partnership and communications activities completed in-house and by contractors to support the 2020 Census. The Census Bureau uses the 2020 Census Integrated Communications Contract (ICC) to govern the work of its contractors, and it is a large and critical component of the overall 2020 Census IPC Program. In August 2016, the Census Bureau contracted the services of Young and Rubicam (Team Y&R), a communications agency, to create, produce, and implement an integrated marketing and communications campaign in support of the 2020 Census. The Census Bureau worked with Team Y&R to develop a National Communications Plan for the 2020 Census. This plan aligns with the partnership function, but is not the complete partnership program.

Figure 1: 2020 Census Integrated Partnership and Communications Operation



All 35 of the 2020 Census operations are planned and implemented through the project management teams coordinated by the Decennial Directorate. These teams are called Integrated Product Teams (IPT) and are cross functional, with members from the various divisions and

Figure 3: Hard-to-Count



13. Partnership Program Initiatives

The Partnership Program is hyper-focused on reaching HTC populations at the grassroots level. The program includes planning activities specifically designed to reach these audiences through initiatives such as:

- State Complete Count Commissions.
- Complete Count Committees, including tribal governments, counties, and municipalities.
- Counting of young children.
- American Indian and Alaska Native (AIAN) program.
- Healthcare community outreach.
- Homeless outreach.
- Native Hawaiian and Other Pacific Islander (NHOPI).
- Faith-based community outreach.
- Higher education.
- Lesbian, gay, bisexual, transgender and questioning/queer outreach.
- Mobile response program.
- Foreign-born and immigrant outreach.
- Thank You campaign.

For decades, the decennial census has undercounted children, especially children under 4 years old. The Census Bureau has conducted research to identify ways to address this undercount. It has used this research to develop new initiatives focused on specific audiences.

2020 Census Operational Plan

A New Design for the 21st Century

Issued December 2018 Version 4.0







The 2020 Census **Operational** Overview





Identify all addresses where people could live.

Conduct a 100-percent review and update of the nation's address list.

Minimize in-field work with in-office updating.

Use multiple data sources to identify areas with address changes.

Get local government input.



Conduct a nationwide communications and partnership campaign.

Work with trusted sources to increase participation.

Maximize outreach using traditional and new media.

Target advertisements to specific audiences.



Collect data from all households, including group and unique living arrangements

Make it easy for people to respond anytime, anywhere.

Encourage people to use the online response option.

Use the most cost-effective strategy to contact and count nonrespondents.

Streamline in-field census taking.

Knock on doors only when necessary



Process and provide Census data.

Deliver apportionment counts to the President by December 31, 2020.

Release counts for redistricting by April 1, 2021.

Make it easier for the public to get information.

Figure 5: The 2020 Census—A New Design for the Twenty-First Century

interviewed after multiple attempts; and to count and provide characteristics for the people in the household using existing high-quality data from trusted sources. A reduced number of visits will lead to significant cost savings.

In addition, the majority of fieldworkers will use mobile devices for collecting the data. Operations such as recruiting, training, and payroll will be automated, reducing the time required for these activities. New operational control centers will rely on automation to manage most of the fieldwork, enabling more efficient case assignment, automatic determination of optimal travel routes, and reduction of the number of physical offices. In general, a streamlined operation and management structure is expected to increase productivity and save costs.

The last step in the 2020 Census is to Release the 2020 Census Results. The 2020 Census data will be processed and sent to the President (for apportionment) by December 31, 2020, to the states (for redistricting) by April 1, 2021, and to the public beginning in December 2021.

2.6 WHAT THE PUBLIC CAN EXPECT

The 2020 Census will be easy to respond to—at any time and from anywhere.

Most households in the continental United States will receive a mailed invitation from the U.S. Census Bureau asking residents to complete the census questionnaire online. The questionnaire asks just a few questions and takes about 10 minutes to answer. Respondents will be able to respond using one of a number of devices, including a desktop computer, a laptop, a tablet, or a smartphone.

For areas of the country with low Internet connectivity or other characteristics that make it less likely the respondents will complete the census questionnaire online, we will be sending a paper

3.4 REENGINEERING FIELD OPERATIONS

The goal of this innovation area is to use technology to efficiently and effectively manage the 2020 Census fieldwork, and as a result, reduce the staffing, infrastructure, and brick and mortar footprint required for the 2020 Census. Figure 13 shows the three main components of the reengineered field operations: streamlined office and staffing structure, increased use of technology, and increased management and staff productivity.

The 2020 Census field operations will rely heavily on automation. For example, the Census Bureau plans to provide most listers and enumerators with the capability to work completely remotely and perform all administrative and data collection tasks directly from a mobile device. Supervisors will also be able to work remotely from the field and communicate with their staff via these devices. These enhanced capabilities significantly reduce the number of offices required to support 2020 Census fieldwork. In the 2010 Census, the Census Bureau established 12 Regional Census Centers (RCCs) and nearly 500 Area Census Offices (ACOs). The agency hired more than

516,000 enumerators to conduct NRFU activities. The new design for the 2020 Census field operations includes six RCCs with 248 ACOs.

In addition, automation enables significant changes to how cases are assigned and the supervision of field staff. By making it easier for supervisors to monitor and manage their workers, the ratio of workers to supervisor can be increased, reducing the number of supervisors required. This streamlines the staffing structure. Other design changes include optimized case assignment and routing.

All administrative functions associated with most field staff will be automated, including recruiting, hiring, training, time and attendance, and payroll. Finally, the new capabilities allow for quality to be infused into the process through alerts to supervisors when there is an anomaly in an enumerator's performance (e.g., the Global Positioning System indicator on an enumerator's handheld device indicates that she or he is not near the assigned location) and real-time edits on data collection. Accordingly, the quality assurance process used in the 2010 Census has been reengineered to account for changes in technology.

The operations shaded in darker blue in Figure 14 include innovations related to Reengineering Field Operations.

ned Office and ng Structure	Increased Use of Technology	Increased Management and Staff Productivity
Area Census Office Manager Census Field Managers Census Field Supervisors Listers and Enumerators	 Automated and optimized work assignments Automated recruiting, training, payroll, and expense reporting Automated applications for address canvassing and enumeration on mobile devices 	 Increased visibility into case status for improved workforce management Redesigned quality assurance operations Improved communications

Figure 13: Summary of Reengineering Field Operations

5.4.3 Address Canvassing

Detailed Planning	In Production	
Status:	DOP published in FY 2016	

Purpose

The Address Canvassing (ADC) Operation serves two purposes:

- Deliver a complete and accurate address list and spatial database for enumeration.
- Determine the type and address characteristics for each living quarter (LQ).

Changes Made Since Version 3.0 Operational Plan Release: To support the 2020 Census, In-Field ADC will begin 2 weeks early in select Area Census Offices (ACO) in each of the six regions. The early start will begin with Census Field Supervisor training and will be a full start to the operation in those select ACOs. All other ACOs will begin activities as scheduled.

Lessons Learned

Based on lessons learned from the 2010 Census studies and reviews, the following recommendations were made:

- Continuously update the maps and address lists throughout the decade, supplementing these activities with ADC at the end of the decade.
- Allow more time in the schedule to fully develop and test the listing instrument.
- Improve the ADC training to emphasize working from the ground to the Handheld Computer.

Operational Innovations

Operational Innovations include the following:

- Conducted In-Office ADC for the entire nation.
- Select an estimated 38 percent of LQs in the self-response areas for In-Field ADC.
- Use automation and data (imagery, administrative records, and third-party data) for In-Office ADC.
- Implement Master Address File (MAF) Coverage Study to validate In-Office ADC procedures, measure coverage, and improve In-Field ADC data collection methodologies.
- Use reengineered field management structure and approach to managing fieldwork, including

new field office structure and new staff positions.

Description of Operation

The Census Bureau needs the address and physical location of each LQ in the United States to conduct the census. During ADC, the Census Bureau verifies that its master address list and maps are accurate so the tabulation for all housing units (HUs), group quarters (GQs), and transitory locations (TLs) is correct. A complete and accurate address list is the cornerstone of a successful census.

The Census Bureau has determined that while there will be a full ADC of the nation in 2020, a full In-Field ADC of the nation is no longer necessary. Advancements in technology have enabled continual address and spatial updates to occur throughout the decade as part of the In-Office ADC effort. This has made it possible to limit In-Field ADC to only the most challenging areas. The scope of the ADC Operation for the 2020 Census includes:

- In-Office ADC: Process of using empirical geographic evidence (e.g., imagery, comparison of the Census Bureau's address list to partner-provided lists) to assess the current address list. This process also removes geographic areas from the In-Field ADC workload based on the availability of administrative data sets (e.g., military lands, national forests) and the method of enumeration planned for the 2020 Census (e.g., areas that will be subject to Update Leave (UL) or Update Enumerate (UE) Operations, which will not be part of In-Field ADC). This process detects and identifies change from high-quality administrative and third-party data sources to reduce the In-Field ADC workload. This process determines the In-Field ADC universe.
 - In-Office ADC assesses the extent to which the number of addresses—both HUs and GQs—in the census address list is consistent with the number of addresses visible in current imagery. This process is known as Interactive Review.
 - A follow-up process seeks to research and update areas identified with growth, decline, undercoverage of addresses, or overcoverage of addresses from the comparison of the two different vintages of imagery and counts of addresses in the MAF. This process

- is known as Active Block Resolution (ABR). ABR was suspended in support of the 2020 Census in early 2017. All other In-Office ADC processes are fully operational.
- In-Office ADC also includes three additional components that review address-level records:
 - Ungeocoded Resolution geocodes addresses in the Master Address File/ Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) System that are not currently assigned to a specific block.
 - In-Office ADC GQ reviews and updates GQ and TL addresses and their associated information.
 - Local Update of Census Addresses (LUCA) Operation Address Validation confirms the existence of the LUCA address submissions by tribal, federal, state, and local governments.
- In-Field ADC: Process of doing a dependent listing in the field to identify where people live, stay, or could live or stay. Field staff compare what they see on the ground to the existing census address list and either verify or correct the address and location information, adding addresses to the list as necessary. Field staff also classify each LQ as a HU or GQ.
- Quality Assurance: Process of reviewing the work of field and office staff. Both In-Field ADC and In-Office ADC work will be validated using quality assurance techniques.
- MAF Coverage Study: A field activity that validates In-Office procedures, measures coverage, improves In-Field data collection methodologies, and updates the MAF on a continuous basis.

Research Completed

The following research has been completed for this operation:

- September 2014: Released the Address Canvassing Recommendation Report.
 - ⁹ Findings: A recommendation was made to not walk every block and to implement the reengineered ADC (In-Field and In-Office).

- February 2015: Completed the 2015 Address Validation Test, which consists of the MAF Model Validation Test and the Partial Block Canvassing (PBC) Test.
 - Findings:
 - The statistical models were not effective at identifying specific blocks with many adds or deletes.
 - The statistical models were not effective at predicting national totals of MAF coverage errors.
 - PBC was successfully implemented as an alternative field data collection methodology; future work will determine how the PBC method impacts cost and quality.
 - Imagery Review successfully identified areas requiring updates; future research is needed to refine the process and determine impacts on quality.
- November 2016: Completed the ADC Test, which included the Buncombe County, North Carolina, and the St. Louis, Missouri, test sites.
 - Findings:
 - The Census Bureau should continue pursuing the use of In-Office ADC methods to reduce the workload for In-Field ADC.
 - In-Office ADC methods are generally effective in detecting where the MAF has remained accurate, where it is keeping pace with changes on the ground, and where fieldwork is needed to acquire address updates.
 - Assumptions about situations that pose challenges to detecting change through imagery analysis are generally correct.
- December 2016: Completed the 2016 MAF Coverage Study.
 - º Findings:
 - For the census frame, the national estimate of overcoverage is 5.5 percent and the national estimate of undercoverage is 6.6 percent.
 - The MAF Coverage Study estimated that there were 7.4 million addresses in the census frame that are deletes, duplicates, or nonresidential.

- The MAF Coverage Study estimated that the census frame and the MAF were missing 3.3 million new addresses.
- October 2017: Completed the ADC Operation of the 2018 End-to-End Census Test.
 - º Findings:
 - In-Office ADC successfully identified and created the In-Field ADC workload, which allowed In-Field ADC to perform targeted fieldwork.
 - Census successfully implemented and tested an automated In-Field listing Quality Control process.
 - A number of systems challenges and technical issues, due to a lack of coordinated system integration and testing, contributed to listing challenges during In-Field ADC. The Census Bureau plans to implement a more rigorous testing program in advance of the 2020 operation to identify systems anomalies ahead of the start of the ADC Operation.

Decisions Made

The following decisions have been made for this operation:

- ✓ The ADC Operation consists of:
 - In-Office ADC.
 - ^º In-Field ADC.
 - ⁹ MAF Coverage Study.
 - Quality Assurance.
- ✓ Administrative records and third-party data sources will be used to validate addresses within each block.
- ✓ GQs will be identified and classified during ADC.
- ✓ Geographic areas (e.g., LQs and feature), which are covered by enumeration operations that include a listing component, will no longer be canvassed by In-Field ADC (e.g., UE, UL, and Remote Alaska areas).
- ✓ Based on funding uncertainty and reprioritization of critical components of the 2020 Census, the Census Bureau will not be able to meet the 25 percent In-Field ADC goal. ABR was discontinued in the winter of 2017 in order to evaluate and redesign the operation to streamline

- production and improve quality control. The discontinuation of ABR will result in a larger workload being sent to In-Field ADC.
- ✓ The current estimate is that 38 percent of the LQs in the Self-Response Type of Enumeration Area will be canvassed during In-Field ADC.
- ✓ Production ADC began in September 2015.
- ✓ ADC provides training for both production and quality assurance processes for in-office work.
- ✓ ADC relies on automated training for production and quality assurance processes for in-field work.
- ✓ ADC updates the Census Bureau's address list using a dependent canvass (from ground to list).
- ✓ ADC validates and collects coordinates for every structure with a LQs.
- ✓ The MAF Coverage Study is planned for implementation throughout the decade. The Census Bureau completed the first MAF Coverage Study during FY 2016. Based on funding uncertainty and reprioritization of critical components of the 2020 Census, the Census Bureau completed the first half of the 2017 MAF Coverage Study but paused it on April 1, 2017.
- ✓ In-Office ADC creates the universe for In-Field ADC.
- ✓ In-Office ADC will review public lands.
- ✓ Results from In-Office ADC can add and remove Basic Collection Units (BCUs) into and from the In-Field ADC universe.
- ✓ All BCUs in the In-Field ADC universe will be identified prior to the start of In-Field ADC.
- ✓ Statistical modeling will not be used in ADC.
- ✓ Imagery will be available on the Listing and Mapping Instrument to use during In-Field ADC.
- ✓ ADC will validate LUCA submissions.
- √ Validation of LUCA submissions will occur during In-Office ADC.
- ✓ The Census Bureau will canvass the whole block (or BCU) during In-Field ADC.
- ✓ ADC will leverage the same capabilities developed for Nonresponse Followup Operation for In-Field ADC including automated payroll, routing to assignments, and various alerts.

- Improve coordination of communications among the Decennial, Field, and Communications Directorates and others.
- Align timing, funding, and design decisions between the development of the IPC Program Plan and the Census Bureau's operational milestones to effectively support all phases of the 2020 Census.
- Establish more specific program metrics for the IPC Program to assist in evaluation and assessment.

Based on the lessons learned from the 2015 Census Test studies and reviews, the following recommendations were made:

- Prioritize minimizing break-offs from the landing page of the online survey instrument.
- Create tailored, customizable, and changeable landing pages in the online survey instrument for each audience that also captures the "look and feel" of advertisements.
- Use digital advertisements to push decennial census response and raise awareness.
- Use digital advertisements and communications and the Internet specifically to reach and increase response from young, single mobiles.
- Perform additional research and testing to determine the appropriate balance between advertisements for a general audience and hard-to-survey audiences.
- Integrate the "look and feel" of mail materials with other communications including advertisements.
- Perform additional research to test which communication channels and messages most increase awareness.
- Perform additional research to test the use of messages targeted to specific audiences via addressable media outlets, such as digital advertising.

Operational Innovations

Operational innovations include the following:

- Microtargeted messages and placement for digital advertising, especially for hard-to-count populations at a census-tract level.
- Advertising and partnership campaign adjusted based on respondent performance.

- Expanded predictive modeling to determine the propensity to respond.
- Expanded use of social media to encourage response.
- · Localized advertising to encourage response.
- Promotion of a teamwork environment among partners through the Census Solutions Workshops.

Description of Operation

Inspiring every household in the country to complete the census is an enormous, increasingly complex, and unparalleled challenge. With an increasingly diverse population and a drop in public participation, an effective communications strategy is critical to the success of the census.

The IPC Program must reach every household in the nation, delivering the right messages to the right audiences at the right time. It must allocate messages and resources efficiently, ensuring consistent messaging, as well as look and feel, across all public-facing materials across communication efforts as well as operations.

An IPC Program contractor has been engaged to support the 2020 Census Program from recruitment through data dissemination. The program will offer the following components:

- Advertising, using print, radio, digital, television, and out-of-home.
- · Earned media and public relations.
- Partnerships, including both regional and national efforts.
- Social media, to include blogs and messages on platforms such as Facebook, Twitter, Instagram, Snapchat, etc.
- · Statistics in Schools.
- · Rapid Response.
- · Web site.

These and other potential components of the IPC Operation will communicate the importance of participating in the 2020 Census to the entire population.

Research Completed

The following research has been completed for this operation:

For the addresses in the initial NRFU workload. enumerators will make an in-person contact attempt to determine the status of the address (vacant, occupied, does not exist) and, when occupied, collect the census response. If the contact attempt was unsuccessful and the administrative records and UAA information identified the address as vacant or not a HU, then the address will be resolved as vacant or not a HU and no further contact will be attempted. If the contact attempt was unsuccessful and the address is believed to be occupied, and where the Census Bureau has high-quality administrative records from trusted sources, administrative records will be used as the response data for the household and no further contacts will be attempted. Examples of source of administrative records and third-party data used to enumerate occupied HUs include Internal Revenue Service Individual Tax Returns, Internal Revenue Service Information Returns, and Center for Medicare and Medicaid Statistics Medicare Enrollment Database.

Addresses removed from the NRFU workload as administrative records vacant, administrative records nonexistent, or administrative records occupied will receive a final mailing that encourages occupants to self-respond to the 2020 Census. Those addresses that are determined to be administrative records vacant or administrative records nonexistent will immediately be mailed a final postcard encouraging self-response; for those addresses that are determined to be occupied and are incomplete after one personal visit attempt, a final postcard encouraging self-response will be mailed within 7 days.

Addresses will also be removed from the workload throughout the course of the NRFU Operation as self-responses are received. Addresses may be added to the NRFU workload from other census operations, such as addresses from the LUCA Appeals process and addresses received through the NID Processing Operation that require a field visit for final resolution. See other sources contributing to the NRFU workload, listed above.

The NRFU Operation will use a reengineered field management structure and approach to managing fieldwork, which includes:

• Using a new field structure, including field staff roles and staffing ratios.

- Using automation for:
 - ^º Training of enumerators and managers.
 - ⁹ Enhanced operational control system.
 - Optimization of daily enumerator assignments.
 - Near real-time operational information for decision making.
 - ^o Payroll submission and approval processing.

A foundational innovation of the NRFU operational design is the optimization of enumerator assignments. On a daily basis, based on an enumerator's home location, work availability, the availability and location of NRFU workload, and other operational business rules, the enumerator will be assigned NRFU addresses. The enumerator will work the addresses in a prescribed order to determine the Census Day status of the HUs, and when occupied, enumerate the HUs. Enumerators will use an automated data collection application on a handheld device to record the Census Day HU status and to enumerate occupied HUs. If a respondent is not at home, a notice of visit will be left directing the respondent to the Internet or Census Questionnaire Assistance (CQA) to self-respond.

The assignment and completion of the NRFU workload are also governed by:

- Best-Time-to-Contact probabilities that are considered in making assignments and are used to increase the likelihood of finding people at home.
- Business rules that prescribe the number of contact attempts for an address and when a proxy response is acceptable. A proxy response is a response provided by a knowledgeable source, such as a neighbor.
- Modifications to business rules as the end of the operation approaches to ensure an efficient and successful operational close-out.

Operational efficiencies are also gained through the use of manager visits. When a number of NRFU addresses share the same street address, such as an apartment or condominium building, the cases will be grouped together for a manager visit. In the manager visit interview, the enumerator will ask the building manager to identify which units were occupied, vacant, or not a HU on Census Day. Units identified as vacant or not

- Two focus groups with rural, economically disadvantaged individuals.
- Four focus groups with low Internet proficiency individuals.
- Four focus groups with Black/African Americans individuals with a hard-to-count focus.
- Six focus groups with American Indian and Alaska Native individuals—two in Alaska and four in the continental United States.
- Four focus groups with Middle East, North African individuals.
- Four focus groups with Native Hawaiian and Pacific Islander individuals.
- Two focus groups with young, single, mobile individuals with mixed race/ethnicity.

The following are the groups for non-English speaking focus groups:

- Four focus groups with Spanish-speaking individuals who live on the U.S. mainland.
- Four focus groups with Spanish-speaking individuals in Puerto Rico.
- Four focus groups with Chinese-speaking individuals.
- Four focus groups with Vietnamese-speaking individuals.

English-speaking audiences prioritized for the 2020 CBAMS Focus Groups represent groups who either will not be surveyed by the 2020 CBAMS Survey or who are anticipated to be underrepresented in that dataset. During this phase of the research, there will not be dedicated focus groups with additional hard-to-count audiences such as people experiencing homelessness, undocumented immigrants, children, persons who are angry at and/or distrust the government, and LGBTQ persons. However, individuals from these groups may be represented within focus groups planned at this stage. They will also be part of the creative testing research, for which more resources should be available to increase capacity to reach and engage audiences. In addition, IPC plans to engage these groups through mechanisms outside of focus groups.

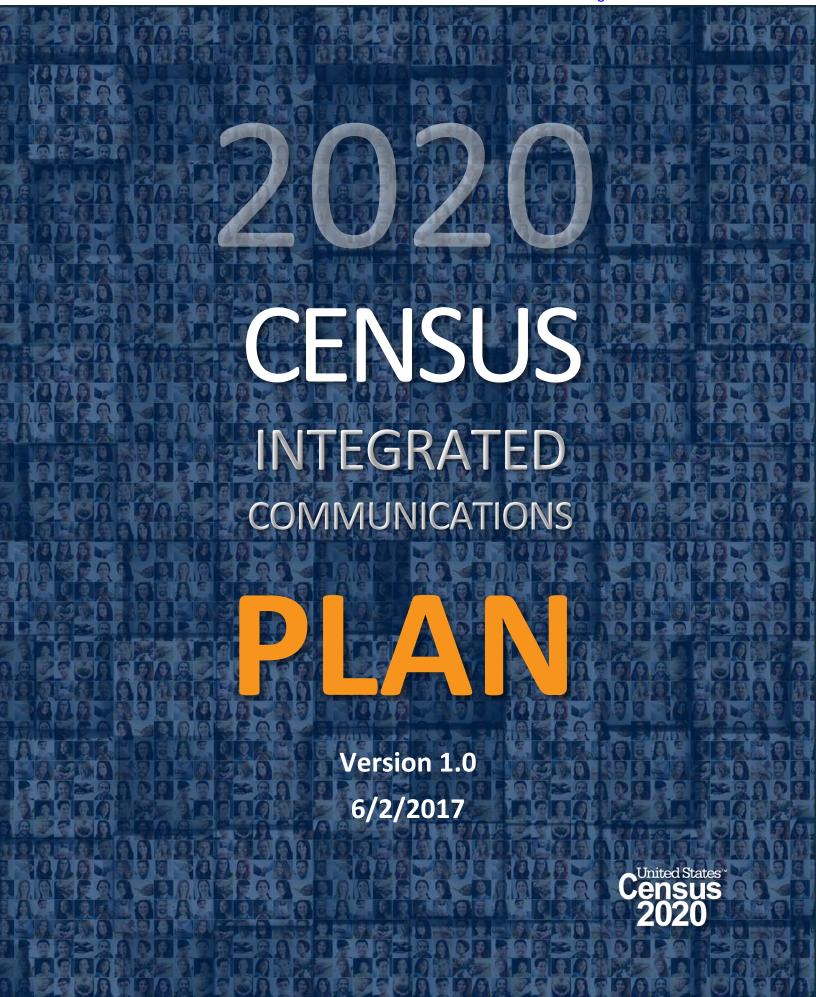
We will advertise in multiple languages and work with the "trusted voices" in communities across the nation to encourage response to the 2020

Census. The Census Bureau will expend resources to reach the hard-to-count populations using both traditional and digital media, as well as the use of ethnic and local media. However, final decisions on how much to allocate to each of these efforts have not been made pending results of the CBAMS research efforts. Digital media will allow us to reach hard-to-count populations more effectively than ever before. Census Bureau partners include national organizations, but also churches and other faith-based organizations, health clinics, legal aid centers, and other support organizations that traditionally undercounted populations rely on.

Partnerships educate people about the importance of the census, motivate them to return their questionnaires, and encourage cooperation with enumerators. The Census Bureau traditionally focuses on establishing partnerships with organizations that represent hard-to-count populations. For the 2010 Census, the Census Bureau established over 250,000 partnerships and has sustained as many of those relationships as possible during the intercensal years to be in a better position to start the 2020 Census than previous censuses in a variety of different ways. In order to optimize self-response, the Census Bureau has a robust relationship through the Partnership Program that includes state, local, and tribal governments; nongovernmental organizations at the national and local level; national companies; and schools. Within the Partnership Program, the Community Partnership and Engagement Program includes objectives to:

- Increase self-response.
- Use "trusted voices" to make census messages relevant at the local level.
- · Grow the partnership audience.
- Increase awareness among the general public.
- Increase partnership engagement at the local level through new or improved programs.

The Census Bureau relies on the support of partners throughout the country to help perform a complete and accurate count. We work together with our partners to extend our outreach efforts and connect with hard-to-count populations. From a HTC Framework perspective, IPC focuses on the Hard-to-Contact, Hard-to-Persuade, and Hard-to-Interview segments.



of the 2020 Census. Our campaign will encompass activities within the following program-level areas:

- Stakeholder Relations: We will work to identify and engage a diverse group of stakeholders to solicit feedback and help raise awareness of the 2020 Census, ensuring open and effective lines of communication throughout the campaign development and execution phase.
- Partnership Program: Local, regional, and national partners will play a valuable role in helping us connect with the public ahead of the 2020 Census. We will prioritize our efforts through a tiered approach, and our plans for a new Partnership Experience Platform (PXP) will help transform the way we connect partners to materials and information.
- Advertising and Media Buying: A new digital environment will present challenges and
 opportunities for this crucial area, including—for the first time—the expanded ability to
 directly drive response through digital ads that connect viewers to the online response
 tool. As with many of these areas, we will use campaign data to continuously refine our
 approach.
- Public Relations and Events, and Crisis Communications: Our public relations strategy will help drive our education and awareness efforts, particularly among hard-to-count audiences. Crisis preparedness and communications will be more important than ever before, with information spreading faster in this new digital environment.
- Website Development and Digital Activities: We will take a mobile-first approach to developing web properties that support the campaign. Using dynamic content, we can also tailor the experience for target audiences and adjust our approach as campaign data become available.
- **Social Media:** Social media outreach offers a unique opportunity to personally engage with the public. We will leverage existing Census channels and develop innovative approaches to promote recruiting efforts, enhance customer service, support digital and on-the-ground events, raise awareness, drive response, and disseminate data.
- Statistics in Schools Program: We have transformed one of our most effective outreach efforts into an evergreen program focused on raising statistical literacy in classrooms across the country. We will continue to develop activities for this program that engage students and that help build awareness of the 2020 Census—in schools and at home.
- Field Recruitment Advertising and Communications: We will leverage various media channels, deploy hyperlocal and national campaigns, and develop one centralized recruiting resource—a 2020 Census jobs website—to hire the right people for the right geographic locations.

- Rapid Response Activities: The Census Bureau will build a rapid response team and develop processes for quickly approving and executing campaign changes. This will allow us to optimize our approach and respond to issues—including potential crises once the self-response period begins and daily data points become available.
- Data Dissemination: The Census Bureau is building a new platform to house and disseminate data. The accurate and efficient distribution of census data will be key throughout the campaign, from driving early awareness, to thanking partners, to supporting and engaging with key stakeholders and public audiences well after the 2020 Census enumeration is completed.

The 2020 Census will constitute the nation's largest peacetime mobilization, producing rich data that will ultimately inform congressional representation and the allocation of billions of dollars to state, local, and tribal governments. It will also involve engaging every person in the United States, while showing effective use of taxpayer dollars and respect for each individual's time and confidentiality.

While specific tactics and needs for program elements differ, three common threads run through all our proposed activities. The 2020 campaign must be:

- Audience-Focused: The Census Bureau is working, and will continue to work, in close
 collaboration with stakeholders to ensure an accurate count, and to devote the
 resources to engage those who may be hard to count. Our approach includes particular
 care to understand the needs and interests of diverse groups to inform a campaign that
 resonates with a large and nuanced populace.
- Research-Based: A program of research will enable the Census Bureau to develop a
 campaign that can reach audiences with relevant, culturally sensitive, and effective
 messages. The research for the 2020 Census will also inform media planning, partner
 outreach, the distribution of promotional materials, and other communications
 activities to effectively and efficiently deploy communications that promote prompt
 responses from audiences.
- **Data-Driven:** The scale of the 2020 Census requires communications that reach and resonate with individuals at the most targeted level possible. This can be made possible through research data and the ability to closely track and aggregate census questionnaire response trends in real time throughout the campaign. If available, such data will be used to produce findings that allow the refinement and optimization of the 2020 Communication Plan.

Keeping in mind these three attributes, we have developed this initial approach to reaching and engaging all audiences—particularly those who may not readily self-respond and therefore may require heavy outreach and persuasion. In the coming years, we will continually improve on and refine this draft, keeping audience findings as well as efficient execution at the forefront of our efforts.

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Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 27 of 160



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No. 204—Book II

House of Representatives

EXPLANATORY STATEMENT SUB-MITTED BY MRS. LOWEY, CHAIR-WOMAN OF THE HOUSE COM-MITTEE ON APPROPRIATIONS REGARDING H.R. 1158, CONSOLI-DATED APPROPRIATIONS ACT, 2020

The following is an explanation of the Consolidated Appropriations Act, 2020.

This Act includes 4 regular appropriations bills for fiscal year 2020. The divisions contained in the Act are as follows:

- ullet Division A—Department of Defense Appropriations Act, 2020
- Division B—Commerce, Justice, Science, and Related Agencies Appropriations Act, 2020
- Division C—Financial Services and General Government Appropriations Act, 2020
- Division D—Department of Homeland Security Appropriations Act, 2020

Section 1 of the Act is the short title of the bill.

Section 2 of the Act displays a table of contents.

Section 3 of the Act states that, unless expressly provided otherwise, any reference to "this Act" contained in any division shall be treated as referring only to the provisions of that division.

Section 4 of the Act states that this explanatory statement shall have the same effect with respect to the allocation of funds and implementation of this legislation as if it were a joint explanatory statement of a committee of conference.

Section 5 of the Act provides a statement of appropriations.

Section 6 of the Act states that each amount designated by Congress as being for emergency requirements or for Overseas Contingency Operations/Global War on Terrorism (OCO/GWOT) is contingent on the President so designating all such emergency or OCO/GWOT amounts and transmitting such designations to Congress.

The Act does not contain any congressional earmarks, limited tax benefits, or limited tariff benefits as defined by clause 9 of rule XXI of the Rules of the House of Representatives.

DIVISION A—DEPARTMENT OF DEFENSE APPROPRIATIONS ACT, 2020

The following is an explanation of the effects of this Act, which makes appropriations for the Department of Defense for fis-

cal year 2020. Unless otherwise noted, references to the House and Senate reports are to House Report 116-84 and Senate Report 116-103, respectively. The language contained in the House and Senate reports warrant full compliance and carry the same weight as language included in this explanatory statement unless specifically addressed to the contrary in the bill or this explanatory statement. While repeating some language from the House or Senate reports for emphasis, this explanatory statement does not intend to negate the language referred to above unless expressly provided herein.

DEFINITION OF PROGRAM, PROJECT, AND ACTIVITY

For the purposes of the Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99–177), as amended by the Balanced Budget and Emergency Deficit Control Reaffirmation Act of 1987 (Public Law 100–119), and by the Budget Enforcement Act of 1990 (Public Law 101–508), the terms "program, project, and activity" for appropriations contained in this Act shall be defined as the most specific level of budget items identified in the Department of Defense Appropriations Act, 2020, the related classified annexes and explanatory statements, and the P–1 and R–1 budget justification documents as subsequently modified by congressional action.

The following exception to the above definition shall apply: the military personnel and the operation and maintenance accounts, for which the term "program, project, and activity" is defined as the appropriations accounts contained in the Department of Defense Appropriations Act.

At the time the President submits the

At the time the President submits the budget request for fiscal year 2021, the Secretary of Defense is directed to transmit to the congressional defense committees budget justification documents to be known as the "M-1" and the "O-1" which shall identify, at the budget activity, activity group, and subactivity group level, the amounts requested by the President to be appropriated to the Department of Defense for military personnel and operation and maintenance in any budget request, or amended budget request, for fiscal year 2021.

REPROGRAMMING GUIDANCE FOR BASE AND OVERSEAS CONTINGENCY OPERATIONS FUNDING

The Secretary of Defense is directed to continue to follow the reprogramming guidance for acquisition accounts as specified in

the report accompanying the House version of the Department of Defense Appropriations bill for Fiscal Year 2008 (House Report 110-279). The dollar threshold for reprogramming funds shall be \$10,000,000 for military personnel; operation and maintenance; procurement; and research, development, test and evaluation.

Also, the Under Secretary of Defense (Comptroller) is directed to continue to provide the congressional defense committees annual DD Form 1416 reports for titles I and II and quarterly, spreadsheet-based DD Form 1416 reports for Service and defense-wide accounts in titles III and IV of this Act. Reports for titles III and IV shall comply with guidance specified in the explanatory statement accompanying the Department of Defense Appropriations Act, 2006. The Department shall continue to follow the limitation that prior approval reprogrammings are set at either the specified dollar threshold or 20 percent of the procurement or research, development, test and evaluation line, whichever is less. These thresholds are cumulative from the base for reprogramming value as modified by any adjustments. Therefore, if the combined value of transfers into or out of a military personnel (M-1); an operation and maintenance (O-1); a procurement (P-1); or a research, development, test and evaluation (R-1) line exceeds the identified threshold, the Secretary of Defense must submit a prior approval reprogramming to the congressional defense committees. In addition, guidelines on the application of prior approval reprogramming procedures for congressional special interest items are established elsewhere in this statement.

FUNDING INCREASES

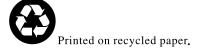
The funding increases outlined in the tables for each appropriation account shall be provided only for the specific purposes indicated in the tables.

CONGRESSIONAL SPECIAL INTEREST ITEMS

Items for which additional funds have been provided or items for which funding is specifically reduced as shown in the project level tables or in paragraphs using the phrase "only for" or "only to" are congressional special interest items for the purpose of the Base for Reprogramming (DD Form 1414). Each of these items must be carried on the DD Form 1414 at the stated amount, as specifically addressed in the explanatory statement.

 \Box This symbol represents the time of day during the House proceedings, e.g., \Box 1407 is 2:07 p.m.

Matter set in this typeface indicates words inserted or appended, rather than spoken, by a Member of the House on the floor.



DIVISION B—COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES AP-PROPRIATIONS ACT, 2020

Report language included in House Report 116-101 ("the House report") or Senate Report 116-127 ("the Senate report") that is not changed by this explanatory statement or the Act is approved. The explanatory statement, while repeating some language for emphasis, is not intended to negate the language referred to above unless expressly provided herein. In cases where both the House report and the Senate report address a particular issue not specifically addressed in the explanatory statement, the House report and the Senate report should be read as consistent and are to be interpreted accordingly. In cases where the House report or the Senate report directs the submission of a report, such report is to be submitted to both the House and Senate Committees on Appropriations ("the Committees").

Each department and agency funded in this Act shall follow the directions set forth in this Act and the accompanying explanatory statement, and shall not reallocate resources or reorganize activities except as provided herein. Reprogramming procedures shall apply to: funds provided in this Act; unobligated balances from previous appropriations Acts that are available for obligation or expenditure in fiscal year 2020; and non-appropriated resources such as fee collections that are used to meet program requirements in fiscal year 2020. These procedures are specified in section 505 of this Act.

Any reprogramming request shall include any out-year budgetary impacts and a senarate accounting of program or mission impacts on estimated carryover funds. Any program, project, or activity cited in this explanatory statement, or in the House report or the Senate report and not changed by this Act, shall be construed as the position of the Congress and shall not be subject to reductions or reprogramming without prior approval of the Committees. Further, any department or agency funded in this Act that plans a reduction-in-force shall notify the Committees by letter no later than 30 days in advance of the date of any such planned personnel action.

When a department or agency submits a reprogramming or transfer request to the Committees and does not receive identical responses, it shall be the responsibility of the department or agency seeking the reprogramming to reconcile the differences between the two bodies before proceeding. If reconciliation is not possible, the items in disagreement in the reprogramming or transfer request shall be considered unapproved. Departments and agencies shall not submit reprogramming notifications after July 1, 2020, except in extraordinary circumstances. Any such notification shall include a description of the extraordinary circumstances.

In compliance with section 528 of this Act, each department and agency funded in this Act shall submit spending plans, signed by the respective department or agency head, for the Committees' review not later than 45 days after enactment of this Act.

TITLE I

DEPARTMENT OF COMMERCE

INTERNATIONAL TRADE ADMINISTRATION OPERATIONS AND ADMINISTRATION

The agreement includes \$521,250,000 in total resources for the International Trade Administration (ITA). This amount is offset by \$11,000,000 in estimated fee collections, resulting in a direct appropriation of \$510,250,000.

The agreement provides no less than \$333,000,000 for Global Markets and includes

\$500,000 for the rural export assistance activities referenced in the Senate report. The agreement does not assume House levels for Industry and Analysis, Enforcement and Compliance, and Executive Direction and Administration. However, ITA is directed to take steps to fill important vacancies across the agency in support of trade promotion, facilitation, and enforcement, as well as additional staff to support the Committee on Foreign Investment in the United States and the new Anti-Circumvention and Evasion Unit.

Quarterly Updates.—The agreement adopts both House and Senate report language on quarterly briefs updating the Committees on ongoing enforcement work as well as prior quarter expenditures and obligation plans, including current staffing levels, due not later than 30 days after the end of each quarter.

SelectUSA.—Senate report language on Foreign Business Investment in the United States is not adopted. The agreement stipulates that up to \$10,000,000 is provided for SelectUSA, provided that ITA includes a detailed accounting of this spending, by object class, as part of its fiscal year 2020 spending plan.

Office of Inspector General Management Alert.—ITA is directed to address the issues raised by the Department of Commerce Office of Inspector General in its memorandum dated November 7, 2019 (OIG-20-005-M), in particular the issue of securing sensitive information.

BUREAU OF INDUSTRY AND SECURITY OPERATIONS AND ADMINISTRATION

The agreement includes \$127,652,000 for the Bureau of Industry and Security (BIS) and does not adopt House report language regarding the division of funds between Export Administration, Export Enforcement, and Management and Policy Coordination.

ECONOMIC DEVELOPMENT ADMINISTRATION

The agreement includes \$333,000,000 for the programs and administrative expenses of the Economic Development Administration (EDA). Section 521 of this Act includes a rescission of \$17,000,000 in Economic Development Assistance Programs balances. Such funds shall be derived from recoveries and unobligated grant funds that were not appropriated with emergency or disaster relief designations.

$\begin{array}{c} {\tt ECONOMIC\ DEVELOPMENT\ ASSISTANCE}\\ {\tt PROGRAMS} \end{array}$

The agreement includes \$292,500,000 for Economic Development Assistance Programs. House language on coal-fired plants is modified to encourage EDA to consider projects to repurpose abandoned coal-fired plants. The agreement modifies House language on climate change resiliency to direct EDA to encourage applicants to submit proposals that are resilient to climate change or incorporate green infrastructure solutions. Funds are to be distributed as follows; any deviation of funds shall be subject to the procedures set forth in section 505 of this Act:

ECONOMIC DEVELOPMENT ASSISTANCE PROGRAMS

[in thousands of dollars]

	Amount
Public Works	\$118,500
Partnership Planning	33,000
Technical Assistance	9,500
Research and Evaluation	1,500
Trade Adjustment Assistance	13,000
Economic Adjustment Assistance	37,000
Assistance to Coal Communities	30,000
Assistance to Nuclear Closure Communities	15,000
STEM Apprenticeships	2,000
Regional Innovation Program Grants	33,000

ECONOMIC DEVELOPMENT ASSISTANCE PROGRAMS— Continued

[in thousands of dollars]

	Amount
Total	 \$292,500

EDA Programs and Impoverished Communities.--In lieu of House report language regarding EDA scoring of competitive grant applications, the agreement directs EDA to expand outreach and technical guidance to prospective grantees with the goal of ensuring increased quality and quantity of applications for assistance aimed at benefitting residents of persistent poverty counties or high-poverty areas, as defined in the House language. The agreement further modifies this language to direct the Government Accountability Office (GAO), in coordination with EDA, to provide a report to the Committees on the percentage of funds allocated by each program in fiscal years 2017, 2018, and 2019, and estimates for fiscal year 2020, to serve populations living in persistent poverty counties and high-poverty areas. Such report shall be delivered no later than 180 days after enactment of this Act.

SALARIES AND EXPENSES

The agreement includes \$40,500,000 for EDA salaries and expenses.

MINORITY BUSINESS DEVELOPMENT AGENCY
MINORITY BUSINESS DEVELOPMENT

The agreement includes \$42,000,000 for the Minority Business Development Agency (MBDA), an increase of \$2,000,000 above the fiscal year 2019 level. The agreement directs MBDA to allocate \$26,500,000 of its total appropriation toward cooperative agreements, external awards, and grants, including not less than \$14,000,000 to continue MBDA's traditional Business Center program and Specialty Project Center program. The agreement provides \$7,000,000 for the Broad Agency Announcements (BAA) program. Senate language on BAAs is not adopted. However, the Committees are concerned about the scope of the 2019 BAA topic areas and direct MBDA to submit a spend plan, which includes the topic areas for fiscal year 2020, to the Committees for these funds 30 days prior to soliciting applications for the fiscal year 2020 awards.

ECONOMIC AND STATISTICAL ANALYSIS SALARIES AND EXPENSES

The agreement includes \$107,990,000 for Economic and Statistical Analysis. The agreement assumes full funding for the Bureau of Economic Analysis' (BEA) efforts to produce annual Gross Domestic Product (GDP) statistics for Puerto Rico, as requested, and includes no less than \$1,500,000 for the Outdoor Recreation Satellite Account.

Income Growth Indicators.—The agreement provides \$1,000,000 to develop income growth indicators and further directs BEA to report the latest available estimates of these measures in calendar year 2020, as described in the Senate report.

BUREAU OF THE CENSUS

The agreement includes \$7,558,319,000 for the Bureau of the Census ("the Bureau").

Puerto Rico and U.S. Territories.—In lieu of House report language regarding Puerto Rico and the U.S. territories, the Committees direct the Bureau to develop an implementation plan to include all residents of the United States, including those in Puerto Rico and the U.S. territories, in the total resident and total population size totals, while maintaining integrity of data sets. Such plan shall be delivered to the Committees no later than 120 days after the date of enactment of this Act.

H10962 Case 8:18-cv-0089150 NAGREDSLOMANT RECOGNED Head HOULZSE 20 Page 20 code labor 17, 2019

In lieu of House report language regarding the Bureau's anticipated report on the feasibility of including Puerto Rico in additional surveys and Bureau of Justice Statistics data products, submitted to the Committees on November 26, 2019, the agreement directs the Bureau to provide a supplement to this report, not later than 90 days after enactment of this Act, containing an overall cost estimate and implementation plan for Puerto Rico's inclusion in these surveys and products. The Bureau is further directed to work with the communities and stakeholders in Puerto Rico, while conducting the Puerto Rico Community Survey, to better understand Puerto Rico's data needs.

CURRENT SURVEYS AND PROGRAMS

The bill provides \$274,000,000 for the Current Surveys and Programs account of the Bureau of the Census, to include funds to continue the level of effort for the Survey of Income and Program Participation, as described in the House report. The agreement does not adopt House report language on the division of funds within the appropriation.

PERIODIC CENSUSES AND PROGRAMS (INCLUDING TRANSFER OF FUNDS)

The bill provides \$7,284,319,000 for the Periodic Censuses and Programs account of the Bureau of the Census. The agreement does not adopt the House report language on the division of these funds at the Program, Project, and Activity (PPA) level.

2020 Decennial Census.—In July 2019, the Census Bureau provided an update to the Committees on its 2020 Census Life Cycle Cost Estimate. While the total estimates for the overall Decennial costs remain unchanged, the Census Bureau assumes efficiencies in the program allow for a greater contingency reserve to support potential risks. The agreement provides \$6,696,000,000 for the Decennial Census and does not adopt House recommended levels for the key operational frames, as described in the House report. The agreement includes \$669,000,000 dedicated towards Secretarial contingency needs that may arise during the Census operation such as major disasters or other unforeseen risks realized, and \$263,000,000 in additional sensitivity risks to support additional pay increases and any reduction in self-response rates beyond the current projections of the Census Bureau. The agreement clarifies a previous requirement regarding the notification to the Committees on the obligation of funds within the Bureau's contingency reserve and directs the Census Bureau to report to the Committees no later than 15 days after any obligation of such funds. Such report shall include a description of the work funded from this reserve during the fiscal year. The agreement also supports no less than the level of effort for outreach and communications that was utilized in preparation for the 2010 Decennial Census, adjusted for inflation.

Mobile Questionnaire Assistance Centers.—Within funds provided, the agreement directs the Census Bureau to support this new initiative aimed at increasing response in historically undercounted and hard to count communities. As part of the report on outreach activities in hard to count communities as directed by the House, the Census Bureau shall include details on how the Mobile Questionnaire Assistance Centers will be utilized as a part of these efforts.

Quarterly Briefing.—The agreement continues the requirement for quarterly updates from the Census Bureau to ensure the Committees are regularly apprised of the status of the 2020 Decennial operations, Census systems readiness, Census Enterprise Data Collection and Processing, implementation of GAO recommendations, and the American

Community Survey. As part of these briefings, the Census Bureau should also include updates on actions it is taking, along with the Department of Homeland Security, to secure the online platform and personal data, as described in the House report, as well as work the agency has done to mitigate risks identified by GAO, as referenced in the Senate report.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION SALARIES AND EXPENSES

The agreement includes \$40,441,000 for the salaries and expenses of the National Telecommunications and Information Administration (NTIA). The allocation of funding provided in the table in the House report is not adopted, nor is the House language regarding Public Safety Communications.

Accurate Broadbard Mapping.—In lieu of section 542 of the House bill, the agreement directs NTIA to report to the Committees, not later than 90 days after enactment of this Act, regarding NTIA's current and planned efforts to improve the accuracy of measurements of broadband coverage in communities, including the sources of data used to help generate broadband coverage maps.

UNITED STATES PATENT AND TRADEMARK OFFICE

SALARIES AND EXPENSES

(INCLUDING TRANSFERS OF FUNDS)

The agreement includes language making available to the United States Patent and Trademark Office (USPTO) \$3,450,681,000, the full amount of offsetting fee collections estimated for fiscal year 2020 by the Congressional Budget Office. The agreement transfers \$2,000,000 to the Office of Inspector General to continue oversight and audits of USPTO operations and budget transparency.

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

The agreement includes \$1,034,000,000 for the National Institute of Standards and Technology (NIST).

SCIENTIFIC AND TECHNICAL RESEARCH AND SERVICES

$({\tt INCLUDING\ TRANSFER\ OF\ FUNDS})$

The agreement provides \$754,000,000 for NIST's Scientific and Technical Research and Services (STRS) account. The agreement adopts the following within STRS: (1) House and Senate language on pyrrhotite and no less than \$1,500,000; (2) House and Senate language on regenerative medicine standards and \$2,500,000; (3) Senate language on industrial internet of things and no less than \$2,000,000; (4) Senate language on plastic and polymeric materials and \$1,000,000 above the fiscal year 2019 enacted level: (5) Senate language on graphene research and no less than \$1.250.000; (6) Senate language on unmanned aerial vehicle challenges and no less than \$2,500,000; (7) Senate language on microelectronics technology and no less than \$2.000.000: (8) Senate language on public health risks to first responders and \$2,000,000: (9) House language and funding for the Greenhouse Gas Program and Urban Dome Initiative; and (10) House and Senate language on metals-based additive manufacturing and no less than \$5,000,000.

Disaster Resilience Research Grants.—In lieu of House and Senate language regarding Disaster Resilience Research Grants, the agreement provides no less than \$2.500.000.

Quantum Information Science (QIS).—The agreement adopts House and Senate language on QIS and provides \$10,000,000 above the fiscal year 2019 enacted level.

Industries of the Future.—The agreement adopts House and Senate language on artificial intelligence and provides \$8,000,000 above the fiscal year 2019 enacted level.

Forward Looking Building Standards.— House report language regarding forward looking building standards is amended to clarify that it neither directs nor authorizes NIST to undertake any regulatory action.

Forensic Sciences.—In lieu of House and Senate report language, the agreement provides \$1,000,000 above the fiscal year 2019 enacted level for forensic science research. Additionally, the agreement provides \$3,150,000 to support the Organization of Scientific Area Committees and \$1,000,000 to support technical merit evaluations.

Facial Recognition Vendor Test.—Senate language regarding the facial recognition vendor test is adopted, and the agreement further directs NIST to continue efforts to secure personally identifiable information and other sensitive data used by this program.

INDUSTRIAL TECHNOLOGY SERVICES

The agreement includes \$162,000,000 in total for Industrial Technology Services (ITS), including \$146,000,000 for the Hollings Manufacturing Extension Partnership (MEP), an increase of \$6,000,000 above the fiscal year 2019 enacted level. At this level, NIST is directed to provide an increase of at least \$100,000 for each of the 51 MEP centers. The agreement further provides \$16,000,000 for the National Network for Manufacturing Innovation, also known as Manufacturing USA.

CONSTRUCTION OF RESEARCH FACILITIES

The agreement includes \$118,000,000 for Construction of Research Facilities, of which \$43,000,000 is for the continued renovation of NIST's Building 1 laboratory.

Safety, Capacity, Maintenance, and Major Repairs (SCMMR).—Within the amount provided for Construction of Research Facilities, the agreement includes no less than \$75,000,000 for NIST to address its most pressing SCMMR projects.

$\begin{array}{c} {\rm NATIONAL~OCEANIC~AND~ATMOSPHERIC}\\ {\rm ADMINISTRATION} \end{array}$

Sexual Assault and Sexual Harassment (SASH).—The agreement adopts House and Senate report language on SASH and provides no less than \$2,000,000, of which \$1,000,000 shall be derived from funding provided to Mission Support, Executive Leadership.

OPERATIONS, RESEARCH, AND FACILITIES (INCLUDING TRANSFER OF FUNDS)

The agreement includes a total program level of \$3,956,213,000 under this account for the coastal, fisheries, marine, weather, satellite, and other programs of the National Oceanic and Atmospheric Administration (NOAA). This total funding level includes \$3,763,939,000 in direct appropriations; a transfer of \$174,774,000 from balances in the "Promote and Develop Fishery Products and Research Pertaining to American Fisheries" fund; and \$17,500,000 derived from recoveries of prior year obligations.

The following narrative descriptions and tables identify the specific activities and funding levels included in this Act.

National Ocean Service (NOS).—\$598,956,000 is for NOS Operations, Research, and Facilities.

NATIONAL OCEAN SERVICE

Operations, Research, and Facilities [in thousands of dollars]

Program	Amount
Navigation, Observations and Positioning	
Navigation, Observations and Positioning	\$159,456
Hydrographic Survey Priorities/Contracts	32,000
Integrated Ocean Observing System Re-	
gional Observations	39,000
Navigation, Observations and Positioning	230,456

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 31 of 160 U.S. Census Bureau's Budget Fiscal Year 2020

As Presented to the Congress March 2019





Exhibit 7

Department of Commerce U.S. Census Bureau Periodic Censuses and Programs SUMMARY OF FINANCING

(Dollar amounts in thousands)

	2018 Actual	2019 Enacted	2020 Base	2020 Estimate	Increase/Decrease from 2020 Base
Total Obligations	\$1,521,272	\$3,600,310	\$4,640,141	\$6,901,800	\$2,261,659
Offsetting collections from:					
Federal Funds	0	0	0	0	0
Trust Funds	0	0	0	0	0
Non-Federal sources	0	0	0	0	0
Recoveries	(8,365)	(36,406)	0	0	0
Unobligated balance, start of year	(6,438)	(1,036,072)	(1,020,000)	(1,020,000)	0
Unobligated balance transferred	3,000	0	0	0	0
Unobligated balance, end of year	1,036,072	1,020,000	0	0	0
Unobligated balance, expiring	555	0	0	0	0
Refund	(676)	0	0	0	0
Budget Authority	2,545,420	3,547,832	3,620,141	5,881,800	2,261,659
Financing:					
Transfer from other accounts	(4,000)	0	0	0	0
Transfer to other accounts	2,580	3,556	3,556	3,556	0
Total, Discretionary Appropriation	2,544,000	3,551,388	3,623,697	5,885,356	2,261,659

Projections of the Size and Composition of the U.S. Population: 2014 to 2060

Population Estimates and Projections

Current Population Reports

By Sandra L. Colby and Jennifer M. Ortman Issued March 2015
P25-1143

INTRODUCTION

Between 2014 and 2060, the U.S. population is projected to increase from 319 million to 417 million, reaching 400 million in 2051. The U.S. population is projected to grow more slowly in future decades than in the recent past, as these projections assume that fertility rates will continue to decline and that there will be a modest decline in the overall rate of net international migration. By 2030, one in five Americans is projected to be 65 and over; by 2044, more than half of all Americans are projected to belong to a minority group (any group other than non-Hispanic White alone); and by 2060, nearly one in five of the nation's total population is projected to be foreign born.

This report summarizes results from the U.S. Census Bureau's 2014 National Projections, with a focus on changes in the age structure and shifts in the racial and ethnic composition of the population—both the total population as well as the native and foreign born.

2014 NATIONAL PROJECTIONS

This report is based on the 2014 National Projections of the resident population by age, sex, race, Hispanic origin, and country of birth (nativity), and include

demographic components of change—births, deaths, and net international migration. The projections, based on the 2010 Census and official estimates through 2013, were produced using cohort-component methods. Such methods project the components of population change separately for each birth cohort (persons born in a given year) based on past trends. The base population is advanced each year by using projected survival rates and net international migration. A new birth cohort is added to the population by applying the annual projected fertility rates to the female population. The projections cover the period 2014 to 2060.

The 2014 National Projections are the first series of Census Bureau projections to incorporate separate assumptions about the fertility of native and foreign-born women. Differentiating assumptions about fertility by nativity is expected to better account for the effects of international migration of the foreign born on changes in the size and composition of the total U.S. population.

The 2014 National Projections, including summary tables, downloadable files, and methodology and assumptions, can be found at <www.census.gov/population/projections/data/national/2014.html>.



UNDERSTANDING THE ASSUMPTIONS USED TO MAKE POPULATION PROJECTIONS

Projections illustrate possible courses of population change based on assumptions about future births, deaths, and net international migration. The projected values presented throughout this report are one possible outcome for the future that would occur only if all the assumptions hold true. All assumptions about the components of change are based on historical trends. Factors that might influence the levels of population components, policy decisions for example, cannot be predicted with any degree of certainty. Therefore, no attempts are made to incorporate these into the assumptions that produce the projections. Both the size and the composition of the projected population reflect the assumptions included in these projections. The accuracy of the projections will depend on how closely actual trends in fertility, mortality, and migration are consistent with these assumptions.

PROJECTED TRENDS IN POPULATION SIZE AND GROWTH

The total U.S. population is projected to increase by 98.1 million between 2014 and 2060. As shown in Figure 1, the population is expected to increase from just under 319 million in 2014 to just under 417 million in 2060. This corresponds to an average increase of 2.1 million people per year.

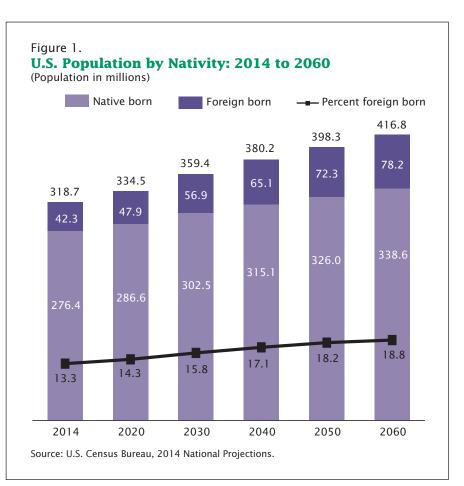
Breaking the population down by nativity illustrates projected differences in the size of the native population relative to the foreign-born population. In 2014, the native population is projected to be 276 million. Between 2014 and 2060, the native population is expected to increase by 62 million (or 22 percent), reaching 339 million in 2060. At the same time, the foreign-born population is projected to grow from 42 million to 78 million, an increase of 36 million (or 85 percent). The foreign born, because its rate of growth is projected to outpace that of natives, is expected to account for an increasing share of the total population, reaching 19 percent in 2060, up from 13 percent in 2014.

Figure 2 shows the projected rate of growth of the native and foreign-born populations by decade. Between 2010 and 2020, the foreign-born population is

projected to increase by nearly 20 percent, compared with only 6.4 percent for natives. In the decades that follow, the pace of growth is projected to slow for both populations, while the substantial gap between the rates of the foreign born and natives will narrow. Between 2050 and 2060, the foreign born are expected to grow by 8.2 percent, compared with 3.8 percent for natives.

Factors Contributing to Population Growth

Changes in the size of the population are driven by the projected number of births, deaths, and net international migrants. Some components, such as births, are those that increase the size of the population, while others, such as deaths, are those that decrease the population. Net international migration can either add to or subtract



2 U.S. Census Bureau

Population Distribution and Change: 2000 to 2010

2010 Census Briefs

Issued March 2011

C2010BR-01

INTRODUCTION

The 2010 Census reported 308.7 million people in the United States, a 9.7 percent increase from the Census 2000 population of 281.4 million. This report discusses population change between 2000 and 2010 for several geographic levels, including regions, states, metropolitan and micropolitan statistical areas, counties, and places.

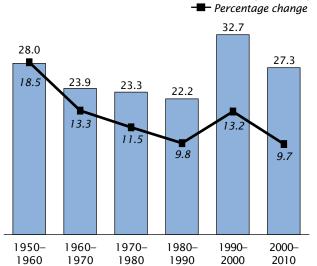
NATIONAL AND REGIONAL CHANGE

The increase of 9.7 percent over the last decade was lower than the 13.2 percent increase for the 1990s and comparable to the growth during the 1980s of 9.8 percent (Figure 1). Since 1900, only the 1930s experienced a lower growth rate (7.3 percent) than this past decade.

From 2000 to 2010, regional growth was much faster for the South and West (14.3 and 13.8 percent, respectively) than for the Midwest (3.9 percent) and Northeast (3.2 percent)

Figure 1. **U.S. Population Change: 1950–1960 to 2000–2010**

(For more information on confidentiality protection, nonsampling error, and definitions, see www.census.gov/prod/cen2010/doc/pl94-171.pdf)



Growth (in millions)

Note: Change for 1950-1960 includes the populations of Alaska and Hawaii in the U.S. total, although they were not U.S. states at the time of the 1950 census.

Source: U.S. Census Bureau, 2010 Census; Census 2000; Frank Hobbs and Nicole Stoops, *Demographic Trends in the 20th Century*, Census 2000 Special Reports, CENSR-4, U.S. Census Bureau, Washington, DC, 2002; and Richard L. Forstall, *Population of States and Counties of the United States: 1790 to 1990*, U.S. Census Bureau, Washington, DC, 1996.

(Table 1, Figure 2). The South grew by 14.3 million over the decade to 114.6 million people, while the West increased by 8.7 million to reach 71.9 million people—surpassing the population of the Midwest. The Midwest gained 2.5 million, increasing that region's population to 66.9 million, and the Northeast's gain of 1.7 million brought that region's

Paul Mackun and Steven Wilson

(With Thomas Fischetti and Justyna Goworowska)



¹ References to historical data in the report are based on the Census 2000 PHC-T series <www.census.gov/population/www/cen2000 /briefs/tablist.html>; Frank Hobbs and Nicole Stoops, Demographic Trends in the 20th Century, Census 2000 Special Reports, CENSR-4, U.S. Census Bureau, Washington, DC, 2002; and Richard L. Forstall, Population of States and Counties of the United States: 1790 to 1990, U.S. Census Bureau, Washington, DC, 1996. National historical data calculations before 1960 include Alaska and Hawaii.

2020 DECENNIAL LIFE-CYCLE COST ESTIMATE (LCCE)

BASIS OF ESTIMATE (BoE) - Version 2.0



Bureau of the Census
June 2019

2020 Decennial LCCE For Official Use Only

June 2019

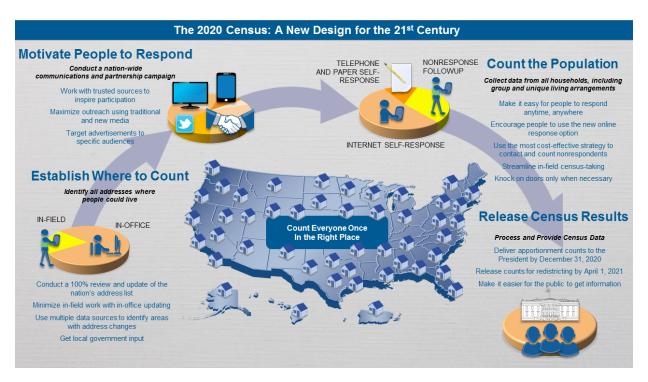


Figure 3: The 2020 Census - A New Design for the 21st Century

The first step ("Establish Where to Count") is to identify all the addresses where people could live. An accurate address list ensures that everyone is counted. For the 2020 Census, the Census Bureau began an In-Office review of 100 percent of the nation's addresses in October 2015 and will continually update the address list based on data from multiple sources, including the U.S. Postal Service; tribal, state, and local governments; satellite imagery; and third-party data providers.

Response rates to surveys and censuses have been declining. As a second step, "Motivate People to Respond," the 2020 Census will include a nationwide communications and partnership campaign. This campaign is focused on getting people to respond on their own (self-respond), as it costs significantly less to process a response provided via the internet or through a paper form than it does to send a fieldworker to someone's home to collect their response.

As a third step, the Census Bureau will "Count the Population" by collecting information from all housing units, including those residing in group or unique living arrangements. The Census Bureau wants to make it easy for all people to respond anytime and anywhere. To this end, the 2020 Census will encourage people to respond via the internet and will not require them to enter a unique Census ID.⁵

The Census Bureau will use the most cost-effective strategy for contacting and counting those who do not respond. The goal for the 2020 Census is to reduce the average number of visits by using available data from government administrative records and third-party sources. These data may be used to

The Census Identification Number or Census ID is provided on the questionnaire mailed to each identified address.



2020 Decennial LCCE For Official Use Only

June 2019

6.3.2.1.2.2 Discrete Risk Cost Method Using Scenario Analysis

Two Discrete Risks were quantified through a scenario analysis by isolating the impact of a single input value: 1) Admin Records Usage and 2) Cloud *Implementation*. For Admin Record usage, the scenario analysis consisted of reducing the number of housing units resolved via use of administrative records by 1,000,000. For Cloud Data Implementation, the scenario analysis cost was estimated using an extrapolation based on the CEDCaP program estimate for cloud costs.

The Scenario Analysis Process used by both for both of these risks is shown below.

Identify risks for conducting Scenario
Analysis in the Portfolio
Risk Register

Set of input assumptions for addressing uncertainty

Determine cost impact of alternative input assumptions

Figure 24: Scenario Analysis Process

Figure 24: Scenario Analysis Process

6.3.2.2 Additional Sensitivity Analysis

Program risks associated with Additional Sensitivity Analysis were discretely estimated based on impacts of occurrence and program mitigation techniques. The following program risks have been reflected in the risk-adjusted cost estimate via additional sensitivity analyses:

- 1. Self-response rates are critical, uncertain variables with expected large cost impacts in the Response Data life-cycle costs. Response rates have declined decade-over-decade for reasons outlined in "Section 2.1: Challenging Environmental Factors", and there are numerous external influences on the program that could cause a dampened self response for the 2020 Census. While the Monte Carlo and Risk Register risks include funding designed to address lowered self response rates, to acknowledge this uncertainty and cost impact, additional sensitivity analysis was performed to account for the possibility that the self-response rate declines below the modeled levels from Census Bureau experts. This would cause an increase in the Nonresponse Followup Workload and cost. The impact of this risk was estimated by decreasing the self-response rate point estimate from 60.5 percent to 55 percent. The estimated direct cost for this risk was \$251.4 million.
- The cost of field operations is considered sensitive to the size and cost of recruiting and hiring
 the necessary workforce in all geographic areas. To acknowledge this uncertainty and cost
 impact, additional sensitivity analysis was performed to account for the possibility that



2020 Decennial LCCE For Official Use Only

June 2019

Secretarial contingency. The results of the September 2017 reconciliation between the POE and DOC ICE was under one percent.

The latest comparison of the 2020 Census POE to an ICE was completed during May 2019. The ICE was again prepared by the DOC OAM beginning in mid-2018 as one of the key recommendations of the Milestone 3 Review for the 2020 Census. The purpose was to continue to refine the ICE reconciliation with updated program office estimates and actuals, as well as the results of the 2018 End-to-End Census Test and system performance and scalability testing in FY 2019. The final difference in direct costs (the point estimate) was about one percent, while the difference in risk and uncertainty was about three percent. The delta between the two estimates (the current version) is zero at an aggregate level. The ICE cost estimators increased their confidence level in the sufficiency of the \$15.625B cost estimate for the 2020 Census from 80 percent in FY 2017 to 86 percent in FY 2019, reflected by the increased ICE risk reserve within the same overall cost total.

11.2 Benchmarking Against Prior Censuses

One of the means to assess the cost of a system or program is to compare it to similar historical systems or programs. The Census Bureau has conducted a Decennial census for many years. The table below shows the historic number of housing units, the cost of the census and the cost per housing unit in constant dollars³³. Table 41: Historical Census Costs (Constant 2020 Dollars) shows the historic trend of increasing cost over each decade as well as the increase in the number of housing units.

Year	Housing Units	Cost	Cost per Housing Unit
1970	69.5 M	\$1.1 B	\$15.8
1980	89.5 M	\$3.0 B	\$33.5
1990	103.5 M	\$4.7 B	\$45.4
2000	117.5 M	\$9.4 B	\$80
2010	133.5 M	\$12.3 B	\$92.1
2020	146.2 M	\$15.8 B	\$108

Table 38: Historical Census Costs (Constant 2020 Dollars)

Figure 95: US Housing Units and Census Costs per Decade below uses dollars inflated to 2020 to show a comparison of historic total cost and cost per housing unit. This graph uses a trend line to demonstrate the rise in cost per housing unit.

145

³³ Presenting constant dollars in 2020 allow for a fair comparison of the costs across different Censuses as the estimates have been adjusted for inflation to show what each Census would have cost in 2020 dollars. Instead of showing the actual cost of each Census in terms of dollars in the year the Census was conducted, these estimates show a comparative price tag in "fungible" dollars.

 $04/\overline{23/12}$

2010 Census Nonresponse Followup Operations Assessment

U.S. Census Bureau standards and quality process procedures were applied throughout the creation of this report.

FINAL

Shelley Walker and Susanna Winder Geoff Jackson and Sarah Heimel

Decennial Management Division Decennial Statistical Studies Division





5.2.1.6 NRFU Production Staffing

Table 170 depicts the budgeted and actual number of field positions along with the frontloading 128 rate and the percent variance.

Table 170: NRFU Production Staffing

Position	Frontloading Rate	Number of Positions Budgeted	Number of Positions Actual
Enumerator	50%	524,919	516,709
CLA	0%	65,266	48,973
CL	0%	40,781	39,559
FOS	0%	4,568	5,575
Total		635,534	610,816

For NRFU, 635,534 total field staff positions were budgeted. However, we only filled 610,816 field positions. The FOS position was the only position type where actual positions were higher than budgeted. The budget called for 4,568 FOS positions, however, 5,575 FOS worked on NRFU. A late program change, which was successfully implemented, included adding an AMFO Assistant position in the LCO office. Most AMFO Assistants (listed as a FOS in DAPPS) charged to the LCO office project; however, some AMFO Assistants mistakenly charged to the NRFU project. It is not possible to distinguish FOS from AMFO Assistant staff who charged to the NRFU task code. As a result, the number of actual NRFU FOS staff is slightly inflated by these AMFO Assistants.

¹²⁸ Frontloading is a staffing strategy of over-selecting enumerators for specific field operations to compensate for the risk of dropouts (attrition). Frontloading allows the LCO to meet or exceed established operational deadlines by ensuring that a pool of trained field staff is available as needed.

```
1
           IN THE UNITED STATES DISTRICT COURT
 2
              FOR THE DISTRICT OF MARYLAND
 3
                   Southern Division
 4
 5
     -----x
    NATIONAL ASSOCIATION FOR THE :
6
    ADVANCEMENT OF COLORED
    PEOPLE, et al.,
7
                 Plaintiffs, :
                                       Case No.
8
          vs.
                                  PWG-18-891
    BUREAU OF THE CENSUS,
    et al.,
10
                 Defendants.
11
12
13
      *** CONFIDENTIAL - UNDER PROTECTIVE ORDER ***
14
15
              DEPOSITION OF BENJAMIN TAYLOR
16
17
                  Friday, July 12, 2019
18
                     Washington, D.C.
19
20
21
22
23
24
    Reported by: Dawn A. Jaques, CSR, CLR
25
    Job No.: 277427
```

```
1
                 In a slight inconvenience, the concept
     has changed a little bit in 2019, but I think that
 2
 3
     it should still show that we've actually reduced
     the number of enumerators we actually think would
     be needed to get the job done, and that's what
     "core" is.
                It's the 260 829.
6
 7
                 So we're reducing the amount that we
     actually think will be needed to retire the
 8
     workload that we've estimated using the
10
     productivity that we've estimated. However, we
11
     are going to prepare an even larger workforce, up
12
     to 399,938 enumerators and CFS, that would be
13
     fully cleared and trained and ready to deploy, and
     that allows for a host of different flexibilities
14
15
     to ensure that the operation goes well.
16
            Q
                 So my question then, if that's the
17
     case, if we go back to Exhibit 8, how is it that
18
     if you're hiring and training 399,000 people so
19
     they're ready to go if needed, how then do you
     reflect a reduction in cost based on the
20
21
     productivity in column G if the total universe of
22
     people that you're training and getting ready to
23
     be deployed actually has increased from 2017 to
24
     2019? Do you see my point?
25
                 Let me walk you through it.
```

```
1
     said we could pick 1- to 39 million number of
 2
     people to put in the field.
 3
                 The only time that we would need more
     dollars beyond what's here is if the workload goes
 4
     up or if the productivity goes down. Those are
     the only two cases. So it gives people total
6
7
     flexibility to put whatever number of people they
     want into the field and manage their workload, but
 8
     as long workload stays the same and productivity
10
     stays the same, it will not change the cost.
11
                 BY MR. CREELAN:
12
            0
                 So let me ask you about the -- I want
13
     to continue this chart discussion, but let me ask
14
     you about the self-response rate because that is
15
     one assumption that did not change from 2017 to
16
     2019, correct?
17
                 That is correct.
18
            Q
                 So what is your understanding for what
19
     the basis is for the 60.5 self-response rate
20
     assumption?
21
                 So the 60.5 percent assumption is
2.2
     based on a decade's worth of intense research by
23
     some extremely smart subject matter experts at the
24
     Census Bureau, and they in general are not swayed
25
     all that much by test data.
```

```
1
                 BY MR. CREELAN:
 2
            0
                 Okay. Are you aware of any test
 3
     conducted by the Bureau in this 2020 Census life
     cycle that produced or showed a response rate, a
 4
     self-response rate, that reached 60 percent?
 5
                 MR. LYNCH: Objection, outside the
6
7
     scope.
                 THE WITNESS: I don't have all that
 8
9
     data in front of me, but it is my understanding
10
     that none would have.
11
                 BY MR. CREELAN:
12
            0
                 Let's continue with this chart just to
13
     round out the changes. I think you were on
14
     column --
15
                 This was I, so this would be J.
            Α
16
                 So I think we already covered the pay
17
     rates, and the same kind of story applies for NRFU
18
     as well.
               There was a slight reduction on the
19
     nationwide average. That did not mean that every
20
     possible community went down; some went up.
21
                 So in general, you can see that the
2.2
     average went from $18.85 to $18.56. Again, very
23
     similar story to what we explained for address
24
     canvassing, and that was a 25 and a half million
25
     dollar reduction in the cost.
```

```
1
     and beyond that 80 percent confidence level, which
     is the same level that's supported by our
 2
 3
     independent cost estimate as well.
                 So everything at that 80 percent
 4
     confidence level is included, so that would be the
 5
     $12.7 billion in programmatic costs that we talked
6
7
     about at the very beginning, plus the $1.2 billion
     in program risk that is appropriated between FY19
 8
9
     and FY20, and the amounts above that for special
10
     risk contingencies are the amounts that are not
11
     currently included.
12
                 BY MR. CREELAN:
13
                 Let me just clarify that.
            0
14
                 Are those special contingencies
15
     reflected in your table in Exhibit 9?
16
            Α
                 Yes.
17
                 So where are they?
18
            Α
                 They're in the Program Risk
19
     Contingency.
                 The 1.25?
20
            0
21
            Α
                 Yes.
2.2
            0
                 So what I'm trying to understand is,
23
     and forgive me if I'm missing something.
24
     shortfall that we just discussed of the
25
     300+ million, that was a portion of the
```

```
1
     $1.25 million, correct?
 2
                 In other words, we use the
 3
     $1.25 million to come up with that shortfall, and
     we didn't have the full $1.25 million -- billion
     covered, correct?
 5
6
                 MR. LYNCH: Objection.
 7
                 THE WITNESS: There is $1.25 billion
     in new Program Risk Contingency in FY20, and we're
8
     saying that about 300 of it was not included in
10
     the President's budget request for FY20.
                 However, there is over 300 that was
11
12
     already appropriated in FY19, and if that's not
13
     utilized, then that will carry over and form the
14
    base for our program contingency.
15
                 BY MR. CREELAN:
16
            Q
                 But what's confusing me, is the
17
     $322 billion that you're referring -- or million
18
     that you're referring to, is that not part of
19
     the billion that we discussed earlier that was
20
     carried over from FY2019?
21
                 No, that's not.
            Α
22
            0
                 So carryover from FY2019 is a billion
23
     plus $322 million that's unused?
24
                 Well, we still need to get to the end
25
     of FY19 without using it, but we are in a position
```

```
1
     where we will likely end the year with a vast
 2
     majority of that carried over to support FY2020.
 3
                 How much of it has been used to date?
                 I don't have the exact number, but it
 4
     is less than $10 million. I think between 5- and
     $10 million.
6
 7
            0
                 So that was a helpful clarification.
                 So getting back to your -- you were
 8
9
     answering the question of if a portion of the
10
     contingency is not appropriated and not available,
11
     but is required, is needed, what, if anything, can
12
     the Census Bureau do at that point?
13
            Α
                 So the contingency would certainly not
14
     be needed until well into the fiscal year,
15
     certainly well into the operations. Unless a very
16
     strange kind of disaster happened, you know, it is
17
     likely that we wouldn't be running out of money
18
     available to us until late in the fiscal year,
19
     late in the NRFU operation.
20
                 So a couple of things will be known to
21
     us by then. One of those is how much is actually
22
     appropriated to us in FY20, which could very well
23
     include money beyond the FY20 budget request.
24
                 But if that isn't, then we will almost
25
     certainly be in very regular communication with
```

```
1
                 BY MR. CREELAN:
 2
            0
                 Any other clarifications at this
 3
    point?
                 I don't believe so.
 4
            Α
                 Okay. I want to switch gears and talk
            0
     a little bit about the Integrated Partnership and
6
7
     Communications Program.
                 First, can you just describe for us
 8
 9
     what that program is and what role it plays in the
10
     census?
11
                 So generally speaking, the Integrated
12
     Communications and Partnership Program constitutes
13
     the entirety of what we define as respondent
14
     outreach, and that is pretty much everything that
15
     the Bureau does to raise awareness about the
16
     2020 Census, both nationally and at the community
17
     level, and there is a very complex set of very
18
     important activities that are done under that
19
     banner.
                 First and foremost is the advertising
20
21
     campaign, which is done on multiple fronts; and
2.2
     then we have the Partnership Program, which is
23
     made up of a national partnership program, which
24
     is generally trying to raise national awareness;
25
     and then the Community Partnership Engagement
```

```
1
     Program, which we sometimes refer to as field
     partnership, but that is really building a network
 2
 3
     of trusted community voices that build trust and
     get the word out about the census, how important
 4
     it is to respond, that it's happening, and
     encourage people to respond.
6
7
                 We viewed that whole program as
     paramount to the self-response of the census.
8
9
            0
                 And is that particularly important to
10
     increase the self-response rate for hard-to-count
11
     communities?
                 MR. LYNCH: Objection, outside the
12
13
     scope.
14
                 THE WITNESS: Generally, yes.
15
                 BY MR. CREELAN:
16
                 Okay, I want to talk a little bit
17
     about the cost estimates for that program.
18
                 If we go to the 2017 BoE, which is
19
     Exhibit 3, and at Appendix FF --
20
                 Yep, I'm there.
21
                 You'll see there's a row headed
            0
2.2
     "Respondent Outreach," and then to the right of
23
     that in the same row, "Advertising Campaign and
24
     Field Partnership Program."
25
                 Does this section include the cost
```



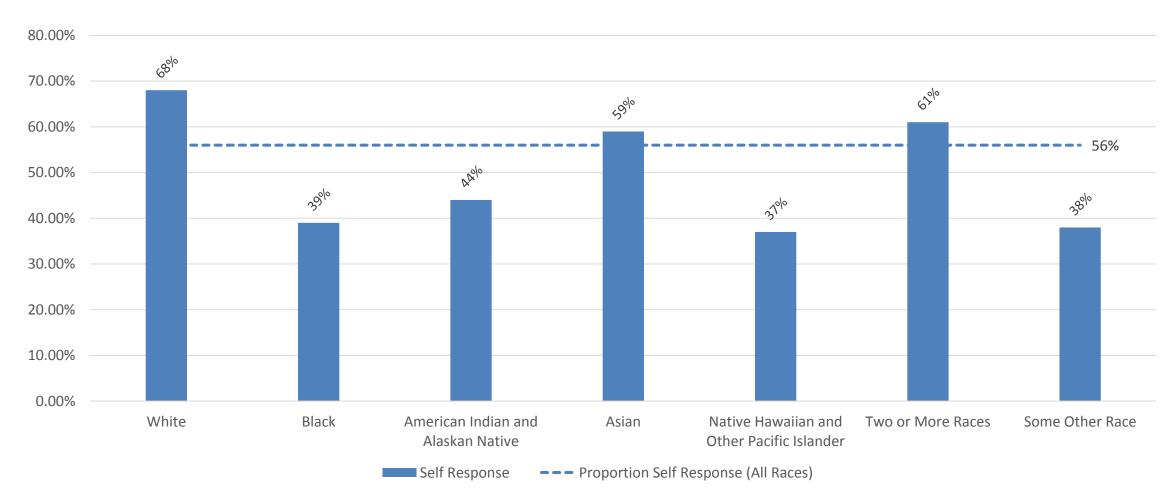




2018 End-to-End Census 85 6 5 cv-00891-PWG Document 169-9 Filed 01/21/20 Page 58 of 160

Proportion of Self-Response for each Race

Total Household Population: 571,000



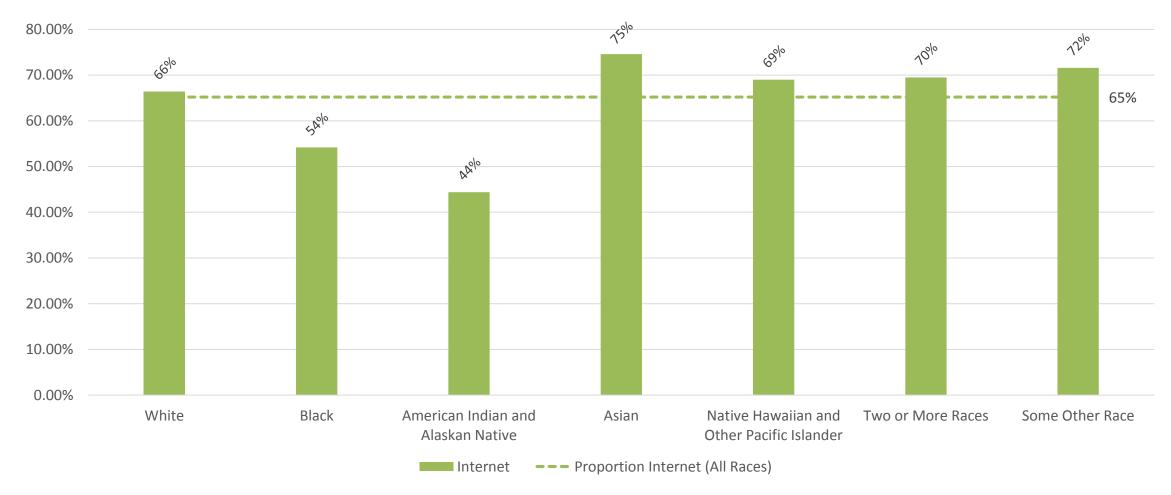




2018 End-to-End Census 18 cv-00891-PWG Document 169-9 Filed 01/21/20 Page 59 of 160

Proportion of Self-Response Modes for each Race – Internet

Total Household Population: 571,000



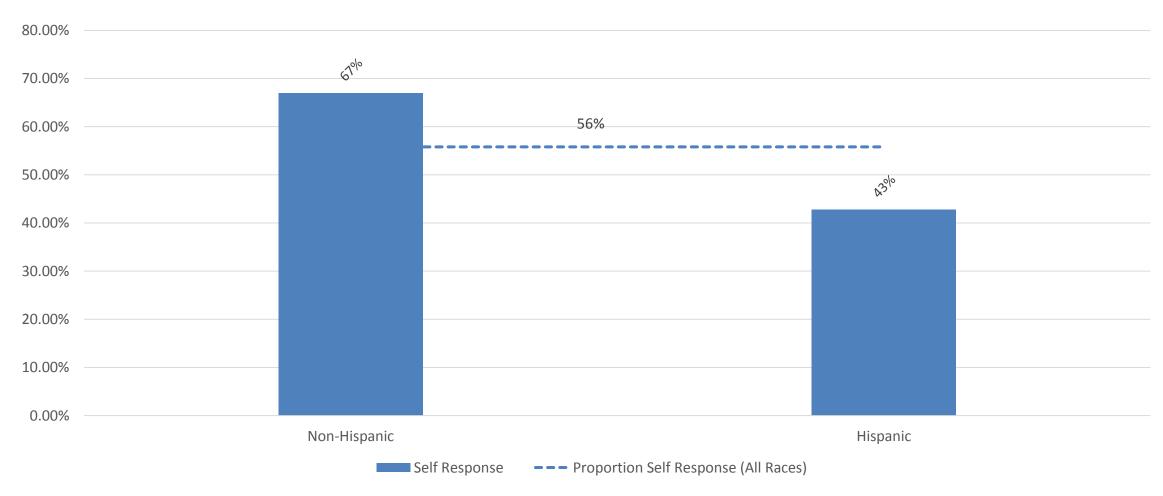




2018 End-to-End Census 169-9 Filed 01/21/20 Page 60 of 160

Proportion of Self-Response for Hispanic Origin

Total Household Population: 571,000









Report to Congressional Requesters

August 2018

2020 CENSUS

Continued
Management
Attention Needed to
Address Challenges
and Risks with
Developing, Testing,
and Securing IT
Systems

is to resolve erroneous enumerations (such as people counted in the wrong place or more than once) and omissions.

The Bureau Continues to Face Challenges and Risks in Implementing Its IT Systems for the 2020 Census

Even as the Bureau has made progress in its system development and testing activities, it continues to face challenges in managing and overseeing the development and testing of its IT systems for the 2018 End-to-End Test and the 2020 Census. Specifically, we have noted challenges in the Bureau's efforts to manage the schedules, contracts, costs, governance and internal coordination, and cybersecurity of its systems.

Schedule management

The Bureau has faced significant challenges in managing its schedule for developing and testing systems for the 2018 End-to-End Test. Further, due, in part, to these challenges, the Bureau is replanning key IT milestones for the 2020 Census.

In May 2018, we reported that the Bureau had delayed by several months key IT milestone dates (e.g., dates to begin system integration testing) for a majority of the 14 operations in the 2018 End-to-End Test. ¹² For example, the Bureau moved the test readiness review date for the fraud detection operation from April 2018 to July 2018—a delay of 3 months. These delays have compressed the time the Bureau has had for integration testing before the systems are deployed in the 2018 End-to-End Test.

Several of the systems subsequently experienced problems during the end-to-end test, including the mobile device applications being used by enumerators for the non-response follow-up¹³ operation of the test. ¹⁴ For example, Bureau officials reported that enumerators have experienced problems with the sensitivity of the mobile devices' touch screen. More

¹²GAO-18-543T.

¹³In non-response follow-up, if a household does not respond to the census by a certain date, the Bureau will send out employees to visit the home. The Bureau's plan is for these enumerators to use a census application, on a mobile device provided by the Bureau, to capture the information given to them by the in-person interviews.

¹⁴As mentioned previously, the non-response follow-up operation of the End-to-End Test is being performed in Rhode Island and began in May 2018 and is scheduled to conclude in August 2018.

specifically, in certain cases, the mobile device application did not identify that the enumerator had made a selection on the touch screen until after the enumerator attempted to select it multiple times.

In addition, we previously reported that the delays in system development and testing had reduced the time available to conduct the security reviews and approvals for the systems being used in the 2018 End-to-End Test. ¹⁵ Officials in the Bureau's Office of Information Security stated that the original plan was to have at least 6 to 8 weeks to perform security assessments for each system. However, given the compressed time frames, Bureau officials informed us that, in some instances, they have had 5 to 8 days to complete certain assessments. This resulted in systems being deployed before the security of all system components were assessed. ¹⁶ We concluded that, going forward, it would be important for these security assessments to be completed in a timely manner and that risks be at an acceptable level before the systems are deployed.

Due in part to IT development and testing schedule challenges that it has identified during the 2018 End-to-End Test, the Bureau is in the process of revising the milestone dates for the additional system development and testing that is to occur after the 2018 End-to-End Test and before the 2020 Census. As noted earlier, the Bureau plans to develop, test, and deploy the 52 systems in the 2020 Census in four operational releases.

According to the Bureau's plans, the agency originally planned to complete development for its first 2020 Census operational release (for recruiting and hiring) in May 2018. However, in June 2018, Bureau officials reported that the Bureau did not meet the May 2018 delivery date for the 2020 Census recruiting and hiring operational release. Additionally, the agency originally planned to complete integration and testing for this operational release by July 2018. However, in July 2018, Bureau officials reported that this milestone had been delayed to August 2018. The Bureau's original milestone dates for the operational releases, reflecting the system development completion status for recruiting and hiring, are shown in table 1.

¹⁵GAO-18-543T.

¹⁶According to the Bureau's Chief Information Security Officer, components that do not have all controls assessed are to be tracked until the assessments are completed, even if it is after the system deploys.

Operational release name		Number of systems in the operational release	Expected completion date for system development	Expected completion date for integration and test	Expected deployment date
1.	Recruiting and hiring	21	May 2018 (Not met)	July 2018 (Not met)	September 2018
2.	Address canvassing	29	November 2018	March 2019	May 2019
3.	Self-response, non- response follow-up, and fraud detection	47	February 2019	June 2019	November 2019
4.	Reporting and coverage measurement	25	October 2019	February 2020	July 2020

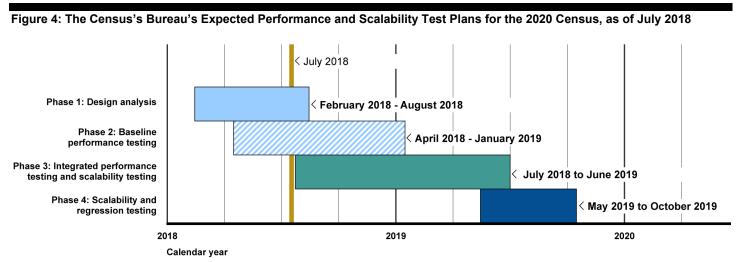
Source: GAO analysis of Census Bureau data. | GAO-18-655

Bureau officials reported that they intend to revise the development and testing milestone dates for all four operational releases for the 2020 Census, but that they do not expect the final deployment dates to change. The officials further noted that they are planning to incorporate lessons learned to date from the 2018 End-to-End Test as part of the replanning efforts. However, Bureau officials had not yet identified a specific time frame for completing these efforts.

Managing the schedule for system development and testing is also important because the Bureau plans to conduct system performance and scalability testing after the 2018 End-to-End Test and prior to the 2020 Census. To Specifically, in February 2018, the Bureau established an approach to conducting performance and scalability testing that began in February 2018 (with system design reviews and analyses) and is expected to be completed in October 2019.

As of July 2018, the Bureau reported that it had completed design reviews and analysis for 11 systems (such as the operational control system) and had developed performance test plans for 8 systems. Figure 4 summarizes the Bureau's performance and scalability test plans.

¹⁷Performance testing is the process of determining how a system behaves under a specific workload (e.g., number of users). Scalability testing is a subset of performance testing to determine a system's effectiveness in handling an increasing number of users.



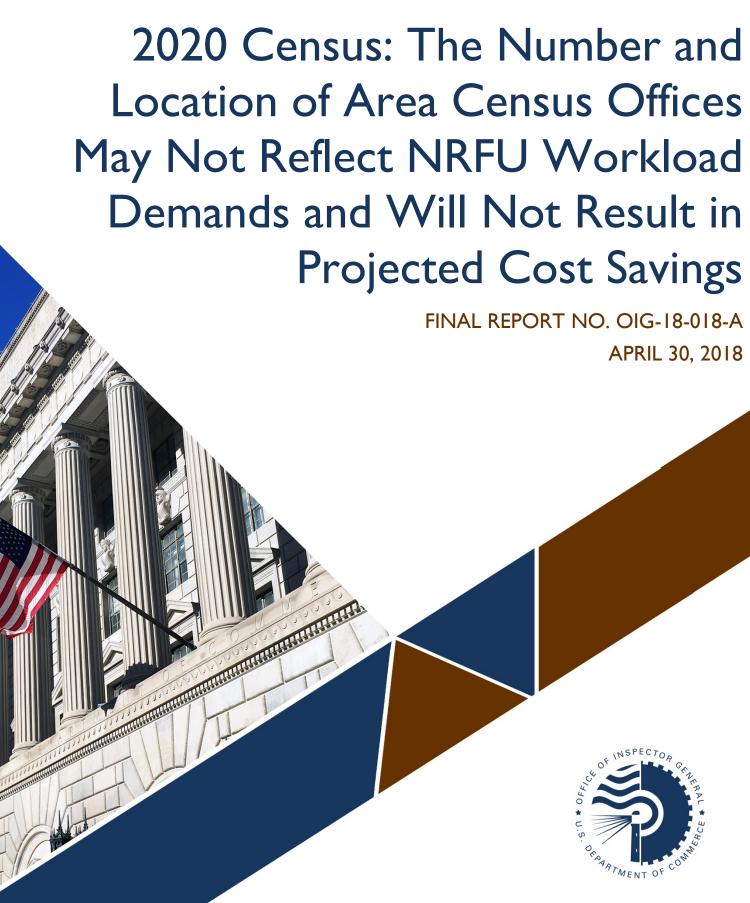
Source: GAO analysis of Census Bureau data. | GAO-18-655

As planning for the 2020 Census continues, it will be important for the Bureau to provide adequate time for system development and testing activities. This will help ensure that the time available for security assessments is not reduced as it has been, thus far, during the 2018 End-to-End Test. We have previously reported that, without adequate time for completing these security assessments, the Bureau will be challenged in ensuring that risks are at an acceptable level before the systems are deployed for the 2020 Census.

Contract management

The Bureau also faces challenges in managing its significant contractor support. The Bureau is relying on contractor support in many areas to prepare for the 2020 Census. For example, it is relying on contractors to develop a number of systems and components of the IT infrastructure. These activities include (1) developing the IT platform (as part of the CEDCaP program) that is intended to be used to collect data from households responding via the Internet and telephone, and for non-response follow-up activities; (2) procuring the mobile devices and cellular service to be used for non-response follow-up; and (3) deploying the IT and telecommunications hardware in the field offices. According to Bureau officials, contractors are also providing support in areas such as fraud detection, cloud computing services, and disaster recovery.

In addition to the development of technology, the Bureau is relying on a technical integration contractor to integrate all of the key systems and infrastructure. The Bureau awarded a contract to integrate the 2020 Census systems and infrastructure in August 2016. The contractor's work



U.S. Department of Commerce
Office of Inspector General
Office of Audit and Evaluation

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Introduction

A large, temporary field infrastructure is required to carry out the decennial census—comprising more than half a dozen major field operations—across the United States. For the 2010 Census, the U.S. Census Bureau (the Bureau) operated 12 regional Census centers, I area office in Puerto Rico, and 494 local Census offices, at a cost of nearly \$331 million. Census staff selected the "area of consideration" for each field office site based on certain criteria, including placing at least one office in each congressional district and equalizing the workload for the nonresponse followup (NRFU)² operation—the decennial census' largest—among each of the 494 local Census offices.

For the 2020 Census, the Bureau only plans on opening 248 field offices (now referred to as area Census offices or ACOs), thereby reducing the 'brick-and-mortar' footprint and associated costs required to carry out the 2010 decennial census field operations by an estimated 50 percent. According to the Bureau, increased use of technology, streamlined staffing, and the ability to work and manage remotely reduce the number of offices needed to support the 2020 Census. This change is designed to contribute to the goal of conducting the 2020 Census at a lower cost per household (adjusted for inflation) than the 2010 Census.

The Bureau's Field Division (specifically, the Field Infrastructure Branch) is responsible for managing the acquisition of temporary offices required to support field operations, such as NRFU, in-field address canvassing, and group quarters enumeration.³ Each ACO must meet space requirements and other specifications, such as those involving telecommunication lines, security requirements, office equipment, and furniture.

As with the 2010 Census, the Bureau is partnering with the General Services Administration's (GSA's) Public Buildings Service to search for, solicit, and acquire office space to meet its field office needs and deployment schedule. GSA's lease acquisition process comprises six phases:

- I. agency requirements development;
- procurement, which includes market development, solicitation, offer evaluation, and award;
- 3. post-award design;
- 4. tenant improvement negotiation;
- 5. post-award construction; and
- 6. acceptance and occupancy.

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¹ Cost factors include such items as leasing fees and expenditures to furnish and equip offices.

² The NRFU operation determines housing unit status for addresses that do not self-respond to the 2020 Census, and enumerates households that are determined to be "occupied."

³ During NRFU, enumerators visit households to obtain the information contained in questionnaires from those that did not respond by mail, internet, or telephone. The in-field address canvassing operation aims to identify where people currently (or could) reside or stay. Temporary field staff compare what they see on the ground to the existing census address list and either verify or correct the address and location information, as necessary. The group quarters operation enumerates people residing or staying in group quarters, such as nursing homes.

Number of offices

0%

2020 Census Life **Field Division Cycle Cost** Percent Input Variable Calculation **Estimate** Increase May 2016 December 2017 55,140,004 Number of addresses 46,223,803 19% Number of visits 98,023,991 136,253,268 39% Number of core 173,021 256,336^a 48% enumerators Enumerator per office 735 1,034^a 41%

Table 2. Input Variables Used to Determine the Number of ACOs

Source: OIG analysis of U.S. Census Bureau information

248^b

248

Bureau officials stated that this increase in the NRFU workload and enumerators would have no impact on the total number of ACOs required for field operations. However, maintaining the same number of offices is not consistent with the Bureau's previous actions. During the initial planning, the Bureau originally intended to open 30 Wave I ACOs to support address canvassing, but subsequently increased the number of offices to 40 due to a projected increase in workload. We found no evidence that the Bureau reconciled the increased NRFU workload and associated increase in the number of enumerators with the Field Division's original assumptions in the 54-step model that the original 248 ACO number was based on. Without such an assessment, the Bureau could not know what impact these increases will have on NRFU operations, other than increased costs.

II. Several Risks Currently Jeopardize ACO Space Acquisition, Requiring Additional Risk Planning

The June 12, 2017, 2020 Census Project Risk Register identified eight risks that directly relate to ACO space acquisition. The most significant of these states that if the field infrastructure is not sufficient to support the work for the 2020 Census, then there is significant risk of not effectively or efficiently managing the associated field workload, which could impact cost and data quality (see appendix C for a listing of all eight risks). However, because the Bureau rated the exposure level of this as a medium-sized risk, it did not prepare mitigation or contingency plans, which were not required by its risk management plan. ¹² The GSA manager responsible for the ACO space acquisition program stated that they wanted to develop a risk matrix for the ACO lease acquisition effort in December

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^a OIG calculation based on the 2020 LCCE Assumption Table.

^b The Bureau decided to open 248 offices based on the enumerator per office ratio and after ensuring compliance with the criteria and consulting with the regional offices.

¹² Mitigation activities aim to reduce the probability of a risk becoming realized, while the objective of the contingency plan is to reduce or recover from the impact of a realized risk.

2010 Census Program for Evaluations and Experiments

May 8, 2012

2010 Census Be Counted and Questionnaire Assistance Centers Assessment

U.S. Census Bureau standards and quality process procedures were applied throughout the creation of this report.

Geoff Jackson and Keith Wechter Susanna Winder

Decennial Statistical Studies Division Decennial Management Division





Executive Summary

The 2010 Be Counted and Questionnaire Assistance Centers Assessment reports the results of 2010 Census Be Counted/Quality Assistance Center operation. Counted/Questionnaire Assistance Center operation provided the public with an opportunity to be included in the 2010 Census if they did not complete a 2010 Census questionnaire, were not personally interviewed by a Census enumerator, or thought they were left off the 2010 Census questionnaire for their address. The Be Counted questionnaires were available in six languages (English, Spanish, Chinese (Simplified), Vietnamese, Korean, and Russian) for stateside and two languages for Puerto Rico (English and Spanish). The Be Counted questionnaires were available to be picked up in Be Counted sites or Questionnaire Assistance Center sites. There were 9,670 Be Counted sites and 29,157 Questionnaire Assistance Center sites located throughout the country in areas where a person was able to mail back a 2010 Census questionnaire. Census partnership specialists worked with the community to establish these sites in businesses, community centers, and libraries, predominantly in hard-to-enumerate areas. Questionnaire Assistance Centers differed from Be Counted sites because the Questionnaire Assistance Centers employed a temporary Census worker at the site (for about fifteen hours per week) to assist respondents in completing their Census forms (including the mailout questionnaire that was delivered to their address and the Be Counted questionnaire). The Be Counted sites did not have any Census Bureau employees available to assist the public.

Total operational spending for the Be Counted/Questionnaire Assistance Centers operation was \$35,574,131 (89.4 percent of the budgeted \$39,804,886). Of the total costs, \$7,662,108 was spent on Be Counted and \$27,287,489 was spent on Questionnaire Assistance Centers. The operation was conducted in Mailout/Mailback areas on schedule from March 19 through April 19, 2010. As planned, 3,268 Questionnaire Assistance Centers in Update/Leave areas opened earlier on February 26, 2010. Across the nation, 31,055 temporary employees worked on the operation (not including Partnership staff). Operational staff included local census office clerks, Be Counted clerks, Questionnaire Assistance Representatives, and Field Operations Supervisors.

Be Counted Sites and Questionnaire Assistance Centers

Thirty percent of the Be Counted sites were located in a business or corporation. Nineteen percent were in a local government building. Twelve percent of the sites were in community organizations or libraries. The Census Bureau hired employees to staff the Questionnaire Assistance Centers. These centers were often located in community organizations (21 percent), local government buildings (20 percent), or libraries (18 percent). Only 13 percent of Questionnaire Assistance Centers were located in a business or corporation. The Census Bureau website provided people with the opportunity to locate Be Counted sites and Questionnaire Assistance Centers.

Some Questionnaire Assistance Centers were located in Suburban/Rural areas, and some were located in Urban Hard-to-Count areas. Questionnaire Assistance Centers in Suburban/Rural areas were visited the most often, as 34.7 percent of all visits were in Suburban/Rural areas. However, Questionnaire Assistance Centers in Urban/Hard-to-Count Areas were more likely to be visited when compared to the proportion of housing units located in those areas. Thirty-one percent of Questionnaire Assistance Centers visits were in Urban/Hard-to-Count Areas while only 12.5

percent of the national housing units were located in Urban/Hard-to-Count Areas. The most frequently visited sites were in the Los Angeles and New York regions. The most common way that a customer learned of the Questionnaire Assistance Centers was by seeing the physical center, not necessarily by a specific means of advertising. Approximately 65 percent of all customers knew of the center because they saw it. The internet or television was only reported by 5.2 percent of all customers as the way they became aware of the center.

The main reasons for people visiting Questionnaire Assistance Centers were because the customer did not receive a questionnaire (38.3 percent of stateside visits) or they lost their questionnaires (11.1 percent of stateside visits). The third most common reason for a person to visit a stateside Questionnaire Assistance Center was to inquire about a job (8.5 percent of visits). When a customer required help with completing a questionnaire, the most common questionnaires that they needed assistance with were the English Be Counted questionnaire (24.8 percent of visits) and the English Mailout/Mailback questionnaire (20.1 percent of visits).

Operational Implementation

Although the main goals of the program were implemented—establishing Be Counted/Questionnaire Assistance Centers sites on time, staffing Questionnaire Assistance Centers, and providing Be Counted boxes and questionnaires to each site as needed—monitoring this operation was a challenge. The first challenge was not having the benefit of using the Operations Control System to monitor the operation. When the Be Counted/Questionnaire Assistance Centers program was removed from the Operations Control System development as a cost saving measure, Field Division had to implement a series of Excel spreadsheets to monitor the program that included monitoring the staffing, sites, and the distribution of questionnaires to the sites. These spreadsheets somewhat resolved the issue for monitoring the operation but were confusing to use and not accurate as they relied heavily on manual input from Local Census Office staff.

In addition to the challenge above caused by dropping the Be Counted/Questionnaire Assistance Centers program from the Operations Control System, another challenge was monitoring the site selection from the regions. Field Division had to create a system within the Integrated Partnership Contact Database to monitor Be Counted/Questionnaire Assistance Center sites. Although the system maintained the sites that were selected for the program, updating it was a challenge during operations. For example, if sites were added or removed within the Local Census Offices, there was some lag time to when these updates were reflected in the Integrated Partnership Contact Database that was loaded to the website. This caused some sites to be listed on the website that were, in fact, closed.

Another challenge was dividing the Be Counted/Questionnaire Assistance Centers responsibilities between operational and partnership areas. There was often confusion about each of the area's roles in the field. Various measures were taken to clarify concerns and roles, such as conducting a thorough presentation on the roles before the start of the operation, but misunderstandings remained. Information gathered from the debriefings points to having only one area be responsible for the entire operation.

Printing of Be Counted Questionnaires

The Census Bureau printed 13,901,000 Be Counted questionnaires. Of those, 5,813,000 were stateside English questionnaires, 4,507,000 were stateside Spanish questionnaires, and 3,280,000 were the other four available languages stateside. For Puerto Rico, the Census Bureau printed 239,000 English and 62,000 Spanish questionnaires. Even though the Census Bureau printed 13,901,000 Be Counted questionnaires, only 39.1 percent were distributed to Be Counted sites and Questionnaire Assistance Centers. The Census Bureau did not distribute 8,469,277 questionnaires. The majority of the forms not distributed were English language questionnaires. The over printing of questionnaires was to minimize the chance for a Regional Office to run out of questionnaires. Of the questionnaires that were distributed to sites and centers, only 2,844,827 (20.5 percent of printed questionnaires) were picked up by the public. Even fewer questionnaires were actually completed and sent back to the Census Bureau. Only 784,103 Be Counted questionnaires were received by Census data capture centers. Thus, 5.6 percent of the printed Be Counted questionnaires were completed.

In relation to form printing, there were challenges on the distribution of these forms to the field. Field Division created a model to distribute the questionnaires based on language use in Local Census Offices using the Partnership Database. Although the distribution accounted for language needs in the Local Census Offices, several regions ran out of non-English language questionnaires in certain areas. Regions had to shuffle questionnaires within their region, and Field Division facilitated the move of questionnaires across regions.

Processing of Be Counted Questionnaires

Since respondents were to pick up Be Counted questionnaires at Be Counted sites or Questionnaire Assistance Centers, the Be Counted Questionnaires were not initially linked to an address on the Master Address File. After a Be Counted questionnaire was data captured, the address information entered by the respondent was sent to the Geography Division to be processed. The total number of Be Counted questionnaires sent to the Geography Division was 780,914, less than the 784,103 Be Counted questionnaires checked into data capture, because this number included blank questionnaires and any questionnaires that were data captured twice. Each address underwent an automated and/or clerical address matching process. The type of processing depended on the type of Be Counted questionnaire. Be Counted questionnaires were grouped into two categories for processing: Type A and Type B cases. Type A cases consisted of addresses from Be Counted questionnaires where the respondent reported that they had a housing unit where they usually lived or stayed. There were 767,204 Type A Be Counted questionnaires. Type B cases consisted of Be Counted questionnaires where the respondent indicated that they did not have an address, and hence were experiencing homelessness. There were 13,710 Type B Be Counted questionnaires.

Type A cases first went to an automated process that attempted to assign the address to a state and county in a process known as header-coding, which is required in order to attempt to match or geocode an address. Any successfully header-coded address was then compared to the Census Bureau's living quarters inventory – known as the Master Address File – in an attempt to match it to an address already in the 2010 Census. If a match was not obtained, or the matching record did not already have an assigned block, an attempt was made to derive a census-block level

geocode. If no match or block geocode could be obtained during automated processing, the address was sent to clerical processing. Also, it should be noted that if a Type A address was not successfully header-coded during automated processing, it was passed directly on to clerical processing for an attempt at header-coding, as well as matching and/or geocoding once successfully assigned to a state and county. Ultimately, Type A cases that were only geocoded and did not match to an existing record on the Master Address File were sent to the Field Verification operation to be verified before their respective addresses, and the associated persons, could be included in the 2010 Census.

Type B Be Counted cases underwent an automated and/or clerical process to assign the case to a specific state and county. This process was also called header-coding. If successfully header-coded, the people on the Type B Be Counted questionnaires were part of a person unduplication process. If they were not identified as a duplicate of someone in a group quarters, then they were randomly allocated to a group quarters in the state and county to which they were header-coded.

Eighty-nine percent of all Type A Be Counted cases were matched to a housing unit and/or geocoded to a block. Slightly less than one percent of Type A cases were matched to a group quarters. Of those that matched to a group quarters, the majority (19.3 percent) matched to an emergency and transitional shelter for people experiencing homelessness. Eight percent of all Type A cases were not matched to any address or geocoded to a block and therefore not eligible to be included in final population counts. In Puerto Rico, 27.8 percent of Type A cases did not match to an address. Of the 202,709 Type A Be Counted cases that went to the Field Verification operation, 38.2 percent were verified as existing housing units.

Of the 13,710 Type B cases, 90.9 percent were header-coded to a state and county. There was additional research conducted on the Type B cases after 2010 Census processing was completed. The Geography Division performed the same type of address-level matching used on Type A cases. This address matching was only completed for this assessment in March 2011 and was not a part of the processing of Type B cases. Of the Type B cases, 39.3 percent were addresses that linked to an existing address or group quarters. Of those people from the Type B questionnaires that provided an address that was linked to an existing living quarters, 41.4 percent of them were found to be already included in those units in the 2010 Census. This shows that a large number of people that were identified as experiencing homelessness did in fact have an address where they lived or stayed on April 1, 2010. This suggests the current method of identifying Type B cases with a check box on the questionnaire is not working as intended.

People Counted In Census from Be Counted Questionnaires

There were 760,748 people counted in the Census from 350,307 total Be Counted questionnaires. Of those people counted in the Census, 736,941 lived or stayed in housing units while 23,807 were counted in group quarters. Of the 736,941 people in housing units, 77.3 percent were counted on an English language Be Counted questionnaire. The second most common questionnaire was the stateside Spanish language Be Counted questionnaire, which consisted of 17.2 percent of all Be Counted people counted in the 2010 Census. The stateside Spanish language Be Counted questionnaire had the largest average number of people counted in 2010 Census per Be Counted language questionnaire, with three people per questionnaire. It had an average of one more person per questionnaire than the stateside English Be Counted

questionnaire. Similar to the housing unit distribution, the Be Counted questionnaires that contributed the most to the people counted in the 2010 Census and living in group quarters were stateside English and stateside Spanish questionnaires.

Recommendations

The key recommendations from the 2010 Be Counted and Questionnaire Assistance Center Program lessons learned sessions and the results of this assessment are the following:

- Manage the Be Counted/Questionnaire Assistance Center operation under one program area so that responsibility is not shared between Partnership and Operations areas.
- Implement an operations control system for the Be Counted/Questionnaire Assistance Center operation which creates real time reports and provides automated tracking.
- Plan and budget for using the Integrated Partnership Control Database and Census Bureau website for the Be Counted/Questionnaire Assistance Center operation to better match the needs of the program.
- Research allowing respondents to complete Be Counted questionnaires on the internet and having an electronic data collection method for Be Counted available in the field.
- Implement Be Counted sites in standard locations.
- Improve the way that respondents can identify themselves as experiencing homelessness (i.e. improve the identification of Type B Be Counted cases).
- Develop an efficient model to determine Be Counted form printing and distribution to the field, if paper forms are used.
- Research the feasibility of improving the structure of Questionnaire Assistance Centers and the methods we use to provide assistance.
- Research collecting and processing non-parsed address data from respondents.

2.1.1 2000 Be Counted Program

The Census 2000 BC Program provided a means for persons to be included in Census 2000 who may not have received a census questionnaire or believed they were not included on one. The program also provided an opportunity for persons who had no usual address on Census Day to be counted in the census. The Census 2000 BC questionnaire contained census short form data questions, a question indicating whether the questionnaire was being completed for the respondent's whole household, and several additional questions needed to geocode the respondent's address and process the completed questionnaires.

Similar to 2010, the 2000 BC questionnaires were not intended to replace the addressed census questionnaire so they were only made available to the public in targeted locations in predominantly hard-to-enumerate areas, based on local knowledge of partnership staff and LCO staff. The sites for placing BC questionnaires were identified using the Population Division's Planning Database and through consultations with local partners to improve the coverage in these areas.

The BC questionnaires were available in English, Spanish, Simplified Chinese, Korean, Tagalog, and Vietnamese – the same languages in which Census made available the Fulfillment questionnaires. The Census Bureau printed about 16 million total BC questionnaires in anticipation of receiving about one million completed questionnaires. The BC questionnaires were available in the targeted locations on March 31, 2000 and were removed from the sites on April 17, 2000. These dates coincided with Census Day (April 1, 2000) and the start of Nonresponse Followup (NRFU) at the end of April. Respondents were able to call the Telephone Questionnaire Assistance number and if they met certain criteria, they could provide their shortform data via a telephone interview. If the respondents did not know their census ID¹ they could request a questionnaire and a BC questionnaire was mailed to their address. The BC questionnaires received for persons with no usual residence were included in the service-based enumeration population universe.

The Census Bureau established 28,136 BC sites for Census 2000 across the nation. The field implementation costs² of the BC program were \$1,479,499.

Respondents returned 804,939 BC questionnaires to the Census Bureau. There were 236,482 households with at least one person enumerated via the BC questionnaire. Of these, 116,019 households were enumerated only by BC questionnaires and the remaining 120,463 households were enumerated on BC questionnaires as well as other census questionnaires. There were 560,880 persons added to the census through the BC questionnaires. There were approximately 15,410 BC questionnaires returned to the Census Bureau for persons with no usual residence.

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¹ A unique identifier associated with an address.

² Field implementation costs refer to the costs associated with training salary, production salary and mileage for BC clerks.

• Include a separate question for people experiencing homelessness instead of the Mark [x] box that appears above the address fields.

The Census Bureau did not implement combining the House Number and Street Name because the automated routines for address matching and geocoding could not process unparsed address fields. The Census Bureau did not implement the second and third recommendations because stakeholders felt the late wording and question changes could not be implemented without having been evaluated in a larger test.

For detailed information about the findings and recommendations of the test, see (Childs, Gerber, and Norris, 2009).

2.3 2010 BC/QAC

2.3.1 Overview

The purpose of the 2010 BC/QAC operation was to identify and collect information on people who believed they did not receive a census questionnaire or who believed they were excluded from the original mailback questionnaire returned by their household. It was also an opportunity for people with no address to complete a questionnaire and be included in the final census count. BC (D-10) questionnaires were available in six languages (English, Spanish, Chinese (Simplified), Vietnamese, Korean, and Russian) for stateside and Spanish and English for Puerto Rico – these six languages were the same six that were offered by the Census Fulfillment form.

The BC/QAC operation included two related components: the BC and the QAC. The BC questionnaire was available at both types of sites. Sites staffed by a QAC representative who provided on-site assistance to customers were referred to as QAC sites. QAC sites also had a BC container with questionnaires available and the QAC representative provided assistance in completing census questionnaires. BC sites were not staffed by a QAC representative, but provided BC questionnaires.

The BC/QAC operation was conducted from February 26, 2010 to April 19, 2010. From February 26 to March 18, 2010, a limited number of QAC sites opened in U/L areas only, to assist individuals in these areas with completing their census questionnaires. During this time, BC questionnaires were not available in order to allow U/L enumerators time to deliver the U/L questionnaires. On March 19, 2010, all QAC sites were opened. Additionally, on this date LCO staff delivered a BC box and BC questionnaires to all sites. The BC operation - based on the Initial Mailout schedule - was to conclude by April 19, 2010 prior to the start of Nonresponse Followup Operation (NRFU) on May 1, 2010.

The number of sites planned for the 2010 Census was 29,966 QAC sites and 9,969 BC sites (i.e., sites not staffed by a QAC representative).

Respondents who called Telephone Questionnaire Assistance (TQA) to request a questionnaire were provided Form Fulfillment Questionnaires (form number D-1) instead of BC Ouestionnaires.

2.3.2 BC Questionnaire Language Selection

The BC questionnaire was available in six languages (English, Spanish, Chinese (Simplified), Vietnamese, Korean, and Russian). After consulting with stakeholders within and outside of the agency, the Census Bureau decided to use need-based, household-level criteria to select the primary non-English languages. Using 2005 ACS data and growth factors from the estimates in Census 2000, the Census Bureau extrapolated the "Number of Occupied Housing Units with no persons age 15 or older who speaks English very well" to identify the languages spoken in 100,000 or more occupied housing units in the United States. The five language groups that met this threshold were Spanish, Chinese, Korean, Vietnamese, and Russian (Angueira, 2007).

2.3.3 BC Questionnaire Design

The BC questionnaire was a paper questionnaire and the cover page provided instructions for the respondent regarding whom they should include on the questionnaire, how to provide a complete address and information on how they could obtain assistance completing the questionnaire. The first question on the questionnaire asked if the respondent had a usual residence. The follow-up question asked the respondent to provide the address where they lived most of the time on April 1, 2010. The questionnaire provided respondents the ability to identify if they were completing the questionnaire for everyone that lived at the address. The BC questionnaire provided respondents the opportunity to provide information for up to ten people at one address. The respondent could enter full demographic (name, relationship, sex, date of birth, age, Hispanic origin, and race) information for five people. If a person was completing the questionnaire for an address with more than five people, they could only enter the following demographic information for persons six through ten: sex, if the person was related to person one, age, and date of birth. The questionnaire collected information on the tenure of the address and a respondent telephone number. The questionnaire did not include coverage questions that are included on the MO/MB and enumerator forms.

2.3.4 Site Allocation

Headquarters (HQ) developed BC/QAC site estimates by region based on Census 2000 for budgeting and planning purposes. The LCOs used the number of sites allocated as guidelines for establishing BC/QAC sites, predominantly in hard to enumerate areas, identified based on Census 2000 results, partnership, and LCO staff local knowledge. LCO partnership staff utilized a planning database, a tract action plan and type of enumeration area (TEA) information to select sites. Site selection was based on the following criteria:

- Sites had to be in either a U/L or MO/MB area.
- Sites had to be located in one of the following Types of LCO areas:
 - Type A Urban/Hard to Count
 - Type B Urban/Metropolitan
 - Type C Suburban/Rural (at a lower rate than Type A and B LCOs, because these were in solely U/L area)
 - Type E Alaska (U/L and MO/MB portions)
 - Type F Puerto Rico

5.1.7.4 Number of People Counted on Be Counted Forms

After the Be Counted questionnaires are linked to a MAFID the Be Counted questionnaires and the people on that return are eligible to be counted in the final population counts. If there are multiple returns at the MAFID and the BC form is not selected as the primary return, persons can be added from the non-selected BC questionnaire when they do not exist on the primary return. There were 760,748 people counted in the 2010 Census from 350,307 BC questionnaires. Of those people counted in the 2010 Census, 736,941 were in housing units while 23,807 were counted in GQs. Table 40 shows the number of people counted in a housing unit and the number of forms in Census by each BC questionnaire type.

Table 40. Number of Forms and People in a Housing Unit in Census by Questionnaire

Туре						
Be Counted	Number	Percentage	Number of	Percentage of	Average	
Questionnaire	of Forms	of Total	People	Total People	People Per	
Type		Forms			Questionnaire	
English	279,444	82.5%	569,965	77.3%	2.0	
Spanish	42,636	12.6%	126,499	17.2%	3.0	
Chinese	6,572	1.9%	17,531	2.4%	2.7	
Korean	2,475	0.7%	5,299	0.7%	2.1	
Vietnamese	1,966	0.6%	5,198	0.7%	2.6	
Russian	930	0.3%	1,659	0.2%	1.8	
Puerto Rico	4,078	1.2%	9,593	1.3%	2.4	
(Spanish)						
Puerto Rico	541	0.2%	1,197	0.2%	2.2	
(English)						
Total	338,642	100.0%	736,941	100.0%	2.2	

Source: CUF

The majority of people counted in the 2010 Census from BC forms were on the stateside English language questionnaire. Of the 338,642 forms counted in housing units in the census, 82.5 percent were from English language forms. The stateside Spanish language questionnaire had the second highest percentage of forms in census housing units with 12.6 percent. Of the 736,941 people in housing units, 77.3 percent were on an English language questionnaire. The second most common questionnaire was the Spanish language questionnaire, which consisted of 17.2 percent of all BC people in the 2010 Census. The stateside Spanish language questionnaire had the largest average number of people per questionnaire counted in the census with three people per questionnaire. It had an average of one more person per questionnaire than the stateside English language questionnaire. The Chinese language questionnaire had the second highest average number of people per questionnaire with an average of 2.7 people.

Table 41 shows the final number of BC questionnaires in the 2010 Census and questionnaires from other census operations that were associated with MAFIDs ultimately included in the 2010 Census. Table 41 also reports if the MAFID with only a BC questionnaire was a new address verified in FV.

Exhibit 17

```
UNITED STATES DISTRICT COURT
1
 2
                FOR THE DISTRICT OF MARYLAND
3
4
5
    NAACP, et al.,
6
            Plaintiffs,
7
                                 ) Case No.
            v.
    BUREAU OF THE CENSUS, et al., ) 8:18-cv-00891-
8
            Defendants. ) PWG
9
10
11
12
13
                        CONFIDENTIAL
14
15
                         DEPOSITION
                     EDWARD KOBILARCIK
16
17
18
19
                   Monday, July 15, 2019
20
21
22
    Reported by: Lori J. Goodin, RPR, CLR, CRR, RSA
23
24
                  California CSR #13959
25
    Assignment No. 277831
```

```
1
     the same?
                  I do not know specific numbers,
 2
            Α.
 3
     because in 2010 it was part of other contracts.
                  But, what I recall is that we are
 4
 5
     paying more this time than we did in 2010.
            Q.
                  And the questionnaire assistance
6
7
     contract.
            Α.
                  Yes.
 8
                  What does that cover?
            Q.
10
                  That covers, that gives the
            Α.
11
     opportunity to respondents to respond via
     telephone mode of response, as well as to answer
12
13
     questions from the public about the census.
                  So, census questionnaire assistance
14
15
     as well as response.
                  And that is a contract with a
16
            Q.
17
     private company?
                  That is correct.
18
            Α.
19
            Q.
                  And do you know in 2010 what, if
     comparable services were provided by contract?
20
21
            Α.
                  Yes.
2.2
            Q.
                  And, do you know by order of
     magnitude the difference? Between 2020 and 2010?
23
24
            Α.
                  I know 2020 is much higher.
25
            Q.
                  Do you know why?
```

1 Α. Allowing for the opportunity for 2 people to respond via the telephone. And does that contract cover 3 Q. services at, in person questionnaire assistance 4 centers that a person could go into, off the street? 6 7 No, this is, my understanding is it is strictly phone calls. And do you know whether there is any Q. provision in the cost estimate for questionnaire 10 assistance centers for the 2020 census? 11 12 Α. I'm not following your question. Is there any money set aside in the 13 Ο. 2020 census for questionnaire assistance? 14 15 Α. That right there is that contract, see Census Ouestionnaire Assistance is that 16 contract vehicle. 17 18 Q. But, as you testified before, it is just telephone. You can't go in person to any 19 center. Is that right? 20 21 Α. That is correct. 2.2 Q. So, what I'm asking is, is there any 23 provision in the Basis of Estimate in any of the cost expenditures for the 2020 census for 24 25 questionnaire assistance in person, do you know?

1 Α. There is not. 2 Ο. Okay. And the device as a service What does that cover? 3 contract. 4 Α. That is to provide to the field staff, which is our enumerators, a device for them to collect either addresses or responses, as 6 7 well as to do their payroll, as well as for them to route them, route them, however you want to 8 say it to route them to the most efficient route for them to get to a housing unit that they need 10 11 to visit. Is that set of services new for the 12 Ο. 13 2020 census? In 2010 we used devices like 14 Α. No. this for the development of the address list. 15 16 Q. Were they actually used or just 17 developed? 18 Α. They were actually used in the 2010 19 census to collect the address information in the 20 address canvassing operation. And is it the same vendor for 2020 21 Ο. 2.2 as it was for 2010? Or a different vendor? 23 Α. A different vendor. And is the software system the same 24 Q. 25 or different in 2010 versus 2020?

1	A. Yes.				
2	Q. Do you know what a lister is?				
3	A. A lister is the actual person who				
4	visits housing units during in-field address				
5	canvassing.				
6	Q. And do you see where it says, "We				
7	observed ten listers and did not detect any				
8	significant deviation from Bureau procedures for				
9	seven of them."				
10	Do you see that?				
11	A. Yes.				
12	Q. And then, "We identified the				
13	following instances of noncompliance during our				
14	observations of the remaining three listers."				
15	Do you see that?				
16	A. Yes.				
17	Q. And there are three bullets with the				
18	instances of noncompliance. Do you see that?				
19	A. Yes.				
20	Q. And, you could see that one lister				
21	did not even update the incorrect addresses on				
22	more than ten occasions. Do you see that?				
23	A. Yes.				
24	Q. And do you know whether the Basis of				
25	Estimate accounts for the risk that three in ten				

```
1
     listers are not following Bureau procedure?
                  I'm not aware that it addresses it
 2
            Α.
 3
     specifically. But you do take the results of a
     test and change procedures as you move forward.
                  And were the results of the
            Ο.
 5
     procedures and the analysis and the Basis of
 6
7
     Estimate changed as a result of this --
            Α.
                  My understanding is that is how the
 8
     Census Bureau would operate.
                  But, do you know whether this
10
            Ο.
     specific issue was addressed?
11
                  I do not know that.
12
            Α.
                  Do you know whether compliance with
13
            Ο.
14
     census procedures regarding in-field canvassing
15
     is a factor that is driving cost assumptions for
16
     the in-field canvassing process?
17
                  Could you repeat that again, please?
18
            Q.
                  Sure. Do you know whether
19
     compliance with census procedures regarding
     in-field canvassing is a factor that drives cost
20
21
     assumptions for that component of the census?
2.2
                  MR. LYNCH: Objection, vague.
23
                  THE WITNESS:
                                 There the estimate
24
         deals with uncertainty in terms of
25
         productivity and workload.
```

```
1
     Census Bureau to do this.
 2
            Ο.
                  And, do you know what is done at the
 3
     Census Bureau when changes are made to ensure
     that the quality level stays the same, of the
 4
 5
     count?
            Α.
                  The design, my understanding is to
 6
7
     maintain the quality that we have.
                  And, does that include the count of
            Ο.
 8
     hard-to-count communities as well?
10
            Α.
                  Yes.
                  You know it is done specifically to
11
            Ο.
     ensure that the quality of that count is not
12
13
     compromised?
                  I think it is the overall design to
14
15
     come up with a quality census.
16
            Q.
                  Okay. So, nothing is done
17
     specifically with regard to a particular
     population, for example?
18
19
            Α.
                  No.
                  MR. LYNCH: Objection.
20
21
                  THE WITNESS: I would say you have
2.2
         the partnership program and you have the
23
         advertising.
24
                  So, the census is a whole package of
25
         intertwined activities that support each
```

```
1
         other.
                 And they are not independent of each
 2
         other.
 3
     BY MR. ROSS:
                  So, did you -- so, if you have data
 4
            Ο.
     showing a particular demographic, let's say for
 5
     instance, is self-responding at a lower rate, you
6
7
     have to spend more money in another area to make
     sure they are counted. Is that fair?
8
                  MR. LYNCH: Objection, hypothetical.
10
         Calls for speculation.
11
     BY MR. ROSS:
12
            Ο.
                  You can answer.
            Α.
                  If there is lower self-response,
13
14
     depending on the area, it is more costly to send
15
     people to knock on, to visit in person.
16
            Q.
                  So, more resources then need to be
17
     devoted to address the response of that
18
     particular group. Is that right?
19
            Α.
                  But, that is built into the design.
     When you factor in, you know, productivity.
20
21
            Ο.
                  But, that design doesn't include
22
     accounting for specific subgroups.
23
                  It is an overall self-response rate.
     Isn't it? It is not specific to subgroup
24
25
     self-response rate. Is it?
```

Exhibit 18



Report to Congressional Requesters

June 2018

2020 CENSUS

Actions Needed to Improve In-Field Address Canvassing Operation

During address canvassing, the Bureau verifies that its master address list and maps are accurate to ensure the tabulation for all housing units and group quarters is correct. For the 2010 Census, the address canvassing operation mobilized almost 150,000 field workers to canvass almost every street in the United States and Puerto Rico to update the Bureau's address list and map data—and in 2012 reported the cost at nearly \$450 million. The cost of going door-to-door in 2010, along with the emerging availability of imagery data, led the Bureau to explore an approach for 2020 address canvassing that would allow for fewer boots on the ground.

Traditionally, the Bureau went door-to-door to homes across the country to verify addresses. This "in-field address canvassing" is a labor-intensive and expensive operation. To achieve cost savings, in September 2014 the Bureau decided to use a reengineered approach for building its address list for the 2020 Census and not go door-to-door (or "in-field") across the country, as it has in prior decennial censuses.² Rather, some areas (known as "blocks") would only need a review of their address and map information using computer imagery and third-party data sources—what the Bureau calls "in-office" address canvassing procedures.

According to the Bureau's address canvassing operational plan, in-office canvassing had two phases:

During the first phase, known as "Interactive Review," Bureau employees use current aerial imagery to determine if areas have housing changes, such as new residential developments or repurposed structures, or if the areas match what is in the Bureau's master address file. The Bureau assesses the extent to which the number of housing units in the master address file is consistent with the number of units visible in the current imagery. If the housing shown in the imagery matches what is listed in the master address

¹A group quarters is a place where people live in a group living arrangement that is owned or managed by an entity or organization providing housing or services for the residents (e.g., college residence halls, residential treatment centers, nursing/skilled nursing facilities, group homes, correctional facilities, workers' dormitories, and domestic violence shelters).

²This change to how the Bureau builds its address list is one of four broad innovation areas for the 2020 Census. The other three innovation areas are (1) seeking to improve self-response by encouraging the use of the Internet and telephone, (2) using administrative records to reduce field work, and (3) reengineering field operations using technology to reduce manual effort and improve productivity, among other things.

- file, then those areas are considered to be resolved or stable and would not be canvassed in-field.
- During the second phase, known as "Active Block Resolution," employees would try to resolve coverage concerns identified during the first phase and verify every housing unit by virtually canvassing the entire area. As part of this virtual canvass, the Bureau would compare what is found in imagery to the master address file data and other data sources in an attempt to resolve any discrepancies. If Bureau employees still could not reconcile the discrepancies, such as housing unit count or street locations with what is on the address list, then they would refer these blocks to in-field address canvassing.

However, in March 2017, citing budget uncertainty the Bureau decided to discontinue the second phase of in-office review for the 2020 Census. According to the Bureau, in order to ensure that the operations implemented in the 2018 End-to-End Test were consistent with operations planned for the 2020 Census, the Bureau added the blocks originally resolved during the second phase of in-office review back into the in-field workload for the test. The cancellation of Active Block Resolution is expected to increase the national workload of the in-field canvassing workload by 5 percentage points (25 percent to 30 percent).

During in-field address canvassing, listers use laptop computers to compare what they see on the ground to what is on the address list and map. Listers confirm, add, delete, or move addresses to their correct map positions. At each housing unit, listers are trained to speak with a knowledgeable resident to confirm or update address data, ask about hidden housing units, confirm the housing unit location on the map, (known as the map spot) and collect a map spot using global positioning systems (GPS). If no one is available, listers are to use house numbers and street signs to verify the address data. The data are transmitted electronically to the Bureau.

The Census Bureau expects that the End-to-End Test for address canvassing will identify areas for improvement and changes that need to be made for the 2020 Census. Our prior work has shown the importance of robust testing. Rigorous testing is a critical risk mitigation strategy because it provides information on the feasibility and performance of individual census-taking activities, their potential for achieving desired results, and the extent to which they are able to function together under full operational conditions.

In February 2017, we added the 2020 Census to GAO's High-Risk List because operational and other issues are threatening the Bureau's ability to deliver a cost-effective enumeration. We reported on concerns about the Bureau's capacity to implement innovative census-taking methods, uncertainties surrounding critical information technology systems, and the quality of the Bureau's cost-estimates. Underlying these issues are challenges in such essential management functions as the Bureau's ability to:

- collect and use real-time indicators of cost, performance, and schedule;
- follow leading practices for cost estimation; scheduling; risk management; IT acquisition, development, testing, and security; and
- cost-effectively deal with contingencies including, for example, fiscal constraints, potential changes in design, and natural disasters.

The Listers Generally Followed Procedures, but the Bureau Experienced Some Issues Reassigning Work, Estimating Workload and Lister Productivity, and Managing to Staffing Goals

The Bureau completed in-field address canvassing as scheduled by September 29, 2017, canvassing approximately 340,400 addresses. Most of the listers we observed generally followed procedures. For example, 15 of 18 listers knocked on doors, and 16 of 18 looked for hidden housing units, which is important for establishing that address lists and maps are accurate and for identifying hard-to-count populations. Those procedures include taking such steps as:

- comparing the housing units they see on the "ground" to the housing units on the address list,
- knocking on all doors so they could speak with a resident to confirm the address (even if the address is visible on the mailbox or house) and to confirm that there are no other living quarters such as a basement apartment,
- looking for "hidden housing units",
- looking for group quarters such as group homes or dormitories, and
- confirming the location of the housing unit on a map with GPS coordinates collected on the doorstep.

³GAO, High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others, GAO-17-317 (Washington, D.C.: Feb. 15, 2017).

Exhibit 19



I

Introduction

The Census Bureau (the Bureau) is constitutionally mandated to carry out a census of the U.S. population every 10 years. Prior to the enumeration, the Bureau verifies and updates the address of each housing unit in the country. In large part, the Bureau accomplishes this by conducting the address canvassing operation prior to the decennial census to refine the Bureau's address list and help ensure that the Bureau can contact every household. The address canvassing operation is just one operation included in the 2018 End-to-End Census (E2E) Test. The address canvassing operation for the 2020 Census will verify the address and physical location of an estimated 143 million housing units within 11 million blocks.

During the address canvassing operation for the 2010 Census, nearly every block in the country was traversed by temporary employees—known as *Listers*—who compared what they saw "on the ground" to address lists generated by the Bureau's Master Address File (MAF). As a cost-saving innovation for the 2020 Census, the Bureau redesigned the address canvassing operation used during the 2010 Census and divided the operation into two components: in-office address canvassing⁴ and in-field address canvassing.⁵

Part of in-office address canvassing is an activity known as "Interactive Review," where a Bureau reviewer compares aerial imagery from different years to identify blocks containing (I) growth and decline, (2) MAF overcoverage and undercoverage,⁶ and (3) the potential to add living quarters in the future. The reviewer designates a block as "active" if the block contains one of these conditions. If not, the reviewer designates the block as "passive." A block is placed "on hold" if additional information is needed to make a determination. Active blocks are included in the in-field address canvassing operation for verification—passive blocks are not. One hundred

² The 2018 E2E Test consists of many operations: (1) address canvassing; (2) group quarters; (3) internet self-response; (4) update leave; (5) nonresponse followup; and (6) post processing and products.

¹ U.S. Const. art. I, § 2.

³ A Census collection *block* is a geographic area containing housing units and other structures bounded on all sides by visible features such as roads, railroad tracks, and rivers—or by invisible features such as county lines, city limits, or property lines.

⁴ In-office address canvassing originally consisted of two operations: Interactive Review followed by active block resolution (ABR). The Bureau cancelled ABR in March 2017. OIG assessed in-office address canvassing activities in two fiscal year 2017 reports: (1) U.S. Department of Commerce Office of Inspector General, May 11, 2017. 2020 Census: The Address Canvassing Test Revealed Cost and Schedule Risks and May Not Inform Future Planning as Intended, OIG-17-024-A. Washington, DC: OIG; and (2) DOC OIG, September 13, 2017. 2020 Census: Evaluation of Interactive Review Address Canvassing Operation Revealed Issues with Quality Assurance Controls, OIG-17-030-I. Washington, DC: OIG.

⁵ The in-field address canvassing operation mirrors the procedures used in the 2010 Census address canvassing operation.

⁶ "Overcoverage occurs when the address list contains an address that does not exist on the ground or when there are multiple instances of an address [sic] for the same residential structure on the ground. Undercoverage occurs when the address list is missing an address [sic] that exists on the ground." See U.S. Census Bureau, July 13, 2017. Study Plan for the Evaluation of Address Canvassing 2018 End-to-End Census Test, Version 0.2. Suitland, MD: Census, 5.

Objectives, Findings, and Recommendations

Our audit objectives were to (I) assess the performance of in-field address canvassing operations and (2) determine whether in-office address canvassing correctly identified blocks for the in-field address canvassing operation.

During our fieldwork, we assessed the performance of in-field address canvassing and identified multiple instances of noncompliance with in-field test procedures by Listers, Supervisors, and Managers. We also determined that in-office address canvassing did not correctly identify blocks for the in-field address canvassing operation.

Specifically, we found the following:

- I. In-office address canvassing did not correctly identify blocks for in-field address canvassing at the Providence test site.
- 2. Resolution of alerts indicating potential instances of low quality and fraud/abuse was sometimes untimely or non-existent.
- 3. The Bureau's ability to inform the 2020 Census address canvassing operation using the 2018 E2E Test faces some limitations.
- 4. The Bureau is unsure whether 26 Listers who updated addresses were qualified.

Appendix A provides additional details regarding the objectives, scope, and methodology of our audit.

I. In-Office Address Canvassing Did Not Correctly Identify Blocks for In-Field Address Canvassing at the Providence Test Site

The Bureau, in part, defined the 2018 E2E Test⁸ to be successful if in-field address canvassing validated the work of in-office address canvassing. However, OIG analysis of the 433 passive blocks included in the 2018 E2E Test found that in-office address canvassing results differed from in-field results in 61 percent of the blocks tested. This does not mean that all of the housing units within those blocks were missed; rather, it means that at least one housing unit was added to or removed from the address list by a field representative. In total, we found that field representatives added 1,087 housing units

⁸ For purposes of this report, reference to the 2018 E2E Test refers to the address canvassing operation only, not peak operations that occurred later.

⁹ Census, August 22, 2017. 2018 End-to-End Census Test Plan, Version 1.1. Suitland, MD: Census.

¹⁰ OIG only analyzed the accuracy of passive blocks, because these blocks will not be sent for in-field verification.

While the 2018 End-to-End address canvassing in-field operation was conducted at three locations—Providence; Beckley, West Virginia; and Pierce County, Washington—the Bureau only included passive blocks in the Providence site to assess the accuracy of the in-office operation.

¹² OIG's analysis included all 433 passive blocks designated by in-office review. The Bureau plans to send passive blocks back to in-office address canvassing for a second review when outside data sources show potential change to those blocks, which could decrease the number of passive blocks and increase the number of in-field blocks. However, this second review did not occur during the 2018 E2E Test—and, as there is no assurance that a second in-office review would have changed the status from passive to active, our analysis included all passive blocks.

Other Matter

On-Site Observations Revealed Some Listers Did Not Comply with In-Field Canvassing Procedures

Noncompliance with test procedures during the in-field address canvassing operation could result in an inaccurate address list. According to the Address Canvassing Lister Manual, ²⁰ Listers were supposed to perform the following procedures during the in-field address canvassing operation and the 2018 E2E Test:

- Verify or update the location address and physical description of the living quarters.
- Stand in the proper location to collect "mapspots" as denoted by the mobile device's "You Are Here Indicator." 22
- Park their car and walk the driveway or path until they come to the house if the Lister saw a mailbox, driveway, or other indication of a house on the ground.
- Canvass each floor of multi-unit structures if they can gain access, and a manager/other knowledgeable person is not available.

We observed 10 Listers, and did not detect any significant deviation from Bureau procedures from 7 of them. We identified the following instances of noncompliance during our observations of the remaining 3 Listers:

- A Lister did not verify the location address and physical description of the living quarters. Specifically, one Lister did not update incorrect addresses on more than 10 occasions.
- Listers did not stand in the proper location to collect "mapspots" or park their car and walk until they came to a house while canvassing. Specifically, QC and production Listers entered "mapspots" away from housing units and while inside their vehicles.
- A Lister did not canvass each floor of a multi-unit structure although they could gain access and a manager/other knowledgeable person was not available.

The following issues contributed to Listers' lack of compliance with procedures:

 Some Listers reported that it was difficult to translate online training on listing and mapping procedures into actual work in-field and that training did not cover adding, editing, or deleting units in multi-unit structures well enough.

 $^{^{20}}$ Census, June 2017. Address Canvassing Lister Manual. Suitland, MD: Census.

²¹ Mapspots (also referred to as MAF structure points) are symbols used to indicate the location of structures containing one or more living quarters.

 $^{^{22}}$ The "You Are Here Indicator" is a symbol on the mobile device's map used to indicate where you are on the ground using Global Positioning System.

Summary of Agency Response and OIG Comments

In its November 8, 2018, response to our draft report, the Bureau concurred with our recommendations. This final report accurately represents the facts and evidence obtained during audit fieldwork—but was revised to add additional context and better reflect the Bureau's position.

Despite concurring with the recommendations, the Bureau disagreed with the methodology used in calculating the in-office address canvassing block classification error rate. As stated in finding I, the Bureau, in part, defined the 2018 E2E Test a success if the canvassing conducted by Listers in the field validated in-office address canvassing results.

In its response to our audit finding I, the Bureau asserted that the blocks within 200 Basic Collection Units marked passive by the in-office operation should be excluded because they were triggered by another activity (such as new, unaccounted for postal service addresses) as being in need of a second in-office address canvassing review. However, these blocks, in fact, did not go through the triggered second in-office review prior to the 2018 E2E Test. Further, there is no guarantee that a second in-office review would have changed the blocks from passive to active. Thus, OIG believes that the most accurate way to assess the validity of in-office results as determined by in-field address canvassing is to include the passive triggered blocks because they were "classified as passive" by in-office address canvassing. Nonetheless, even if the passive triggered blocks were excluded, the in-office block classification error rate would still be 45 percent—which, as we state in finding I, indicates that in-office address canvassing is yielding results that are either incorrect or inconsistent with in-field address canvassing to a substantial degree.

Additionally, the Bureau noted in its response that we used "raw unprocessed results" in our analysis. In contrast, the Bureau stated that the Geography Division conducted a separate analysis to determine the accuracy of the Listers' actions to add or delete addresses during canvassing. We do not reference the analysis in the report because it was conducted after our fieldwork was completed and, therefore, was outside of the scope of our audit. It should be noted that when the Bureau (I) excluded the passive triggered blocks and (2) conducted this additional analysis, it still found that in-office address canvassing had a greater than 30 percent block classification error rate.

Furthermore, the Bureau stated that only 2 percent of the addresses within passive blocks represented coverage errors. However, to quantify the number of housing unit additions or deletions that were missed in the in-office address canvassing operation, we looked at a Bureau study conducted during fiscal year 2016. The Bureau took a nationally representative sample of 18,500 blocks and found that errors in passive blocks could result in 1.4 million missed households in the 2020 decennial census and 3.4 million households incorrectly left on the address list, causing enumerators to conduct unnecessary visits. Moreover, the Bureau does not know which populations or regions will be most affected by the missed households in passive blocks.

Exhibit 20



Report to Congressional Requesters

July 2017

2020 CENSUS

Bureau Is Taking
Steps to Address
Limitations of
Administrative
Records

has been unsuccessful, the Bureau is to use the same records to determine the count of people living in the household as well as the race, sex, and other characteristics of each person as required by the census. These modelling procedures using administrative records have been demonstrated by the Bureau in prior tests.

Administrative records collected by various programs, by their design, only contain information about the subgroups of the population the respective programs serve or engage. For example, the Selective Service System registers only men over the age of 18; therefore, the data provided to the Bureau include no women or children. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) covers low-income women and children up to age 5 who are found to be at nutritional risk and who apply for food assistance. Men and families above the program's income criteria do not generally appear in the WIC data provided to the Bureau. Appendix II includes a more extensive list of administrative-record sources the Bureau plans to use and who is covered by them.⁷

The Bureau Is Taking Steps to Address Known Limitations with Administrative Records

To position the agency to realize cost and quality improvements for the decennial, the Bureau has implemented steps to ensure that using administrative records is viable for 2020 and to address potential coverage limitations.

The Bureau Took Actions to Address the Risk of Administrative Records Missing Certain Populations Because the purpose and target group of each of the programs vary, the demographic data collected from those covered by each program are not always the same. For example, in May 2017 the Urban Institute issued a report that raised several concerns about the use of administrative records for the 2020 Census, such as whether those records are less likely to represent people who do not routinely interact with society's

⁷Bureau officials state that they are assessing administrative records and will determine the final set of administrative records data sources to be used to support the 2020 Census by September 2018.

public institutions—citing the homeless, undocumented immigrants, formerly incarcerated people, and runaway or trafficked youth.8

According to Bureau reviews of numerous record sources, such as from Supplemental Security Income (SSI) and Temporary Assistance for Needy Families (TANF), noncitizens and more recent entrants into the United States who are less likely to be eligible for some government assistance programs are underrepresented by counts based solely on administrative records. Further, according to the Bureau, third-party sources that rely heavily on utility or publicly available property tax records will underrepresent noncitizens and recent immigrants who are less likely to have established housing. Moreover, according to a working group of the Bureau's National Advisory Committee tasked with advising on administrative records, the records generally tend to over-represent white and economically advantaged populations in comparison to how other groups appear in the records.

To help minimize possible coverage problems with administrative records so that subpopulations are not miscounted, the Bureau introduced a business rule to include administrative records for consideration in its modeling only when a minimum amount of information is present for a given household. Specifically, the Bureau must have an age for and be able to uniquely identify each person within its administrative records sources in order for the records to be considered for enumeration for that household. Bureau officials acknowledge that this business rule limits somewhat the extent to which it can rely on administrative records in place of more expensive door-to-door data collection methods for households that do not respond. Yet they also believe that their research has shown that the rule ensures that administrative records are used only in circumstances where research has shown them to be most accurate.

The Bureau has also developed statistical models for determining when administrative records are sufficiently reliable to represent a housing unit. The Bureau models what administrative records indicate about whether a housing unit is vacant, non-existent, or occupied, and also about who lives in units believed to be occupied. The models allow the Bureau to estimate the probability that administrative records are providing the correct information; the Bureau then uses the records when the

⁸The Urban Institute, *Administrative Records in the 2020 US Census: Civil Rights Considerations and Opportunities* (Washington, D.C.: The Urban Institute, 2017).

probabilities exceed a specified threshold. According to the Bureau, this approach lets it confidently rely on records where they appear to be strongest, resolving in an objective manner what the administrative records may report for the housing units in question.

The Bureau modified its NRFU contact strategy to ensure better coverage of non-Hispanic black households. The Bureau found in simulations of its initial administrative records approach that it was obtaining higher vacancy rates in areas of high concentration of non-Hispanic blacks than it did in those areas in the 2010 Census. The Bureau attributed this result to its administrative-records modeling of which households are vacant, and the Bureau determined that it could improve the modeling results by requiring two—instead of just one—notices from USPS that mail could not be delivered to the addresses in question. So the Bureau added the step of an additional mailing to its contact strategy for households that USPS flagged as vacant. The Bureau acknowledged that this additional contact will cost more, but it will decrease the chance of a family being missed by the census, particularly where housing units turn out not to be vacant.

The Bureau Plans to Assess and Link Its Data Sources to Address Incomplete or Inaccurate Administrative Records Although the Bureau has no control over the accuracy of data provided to it by other agencies, it is responsible for ensuring that it is fit for purposes of the 2020 Census. Administrative records collected by other agencies for programs they administer are inevitably collected under a variety of circumstances and conditions. Since they are collected for purposes other than for the decennial census, the quality control over their collection will vary from how the Bureau would execute it or need it to be. The data received by the Bureau may be incomplete or inaccurate. Missing data can make it more difficult to match administrative records.

Before using any administrative records to support census operations—whether for the 2020 Census or other Bureau surveys—the Bureau subjects each source and its files to a structured quality assurance process to (1) identify any technical limitations that may need to be considered and (2) help determine their suitability for the decennial and other Bureau programs. Although, we did not test the use of this process, figure 1 shows the process the Bureau is to follow.

Exhibit 21

2020 Census Operational Plan

Deborah Stempowski

Chief, Decennial Management Division





2020 NRFU Contact Strategy

Overview

- Primary issues to resolve from mid-decade testing
 - Low resolution rate for telephone reinterview operation
 - Occupied status for Administrative Record (AdRec) vacant/delete determinations
 - 18% of AdRec Vacants were found to be occupied
 - 30% of AdRec Deletes were found to be occupied
 - High unresolved rate-cases closed without minimal information
- Solution strategies
 - Eliminate telephone mode for reinterview and send all reinterview cases to field for personal visits
 - At least one visit for AdRec Vacant/Delete cases
 - If visit indicates the housing unit may be occupied, the case will remain in the NRFU for additional contact attempts
 - Phased contact strategy-Phase 1, Phase 2, Closeout





Exhibit 22

HARD-TO-CQUINT CENSUSTRACTS IN PRINCE GEORGE'S COUNTY MARYLAND

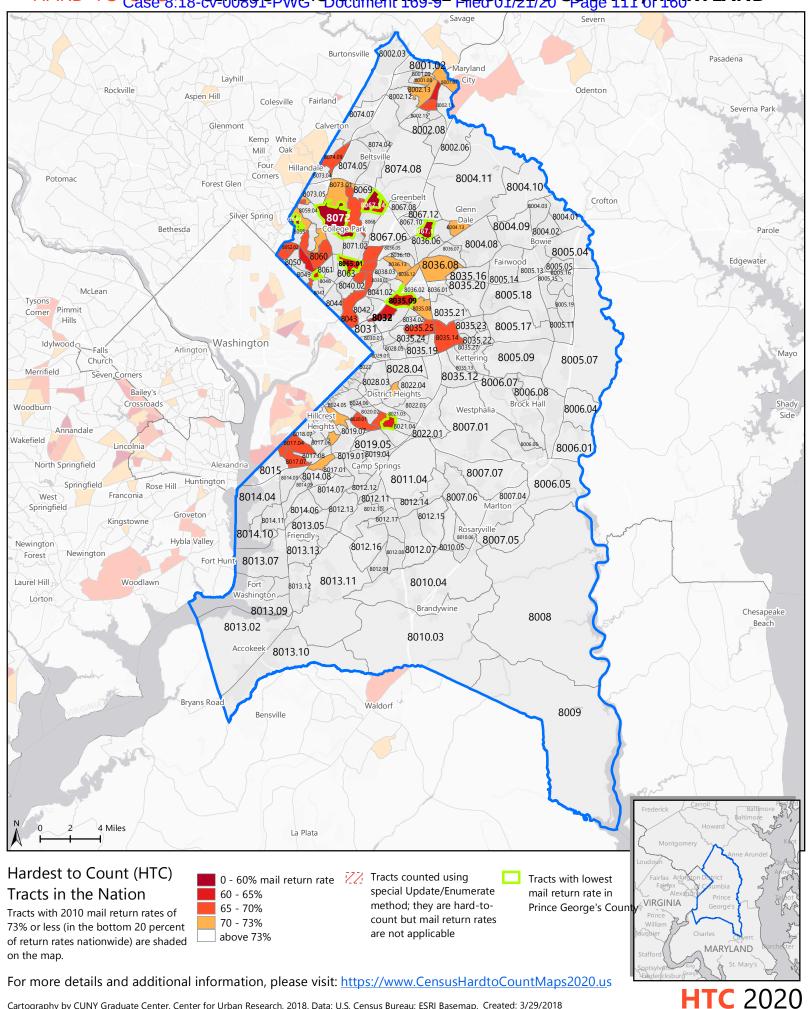


Exhibit 23

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 113 of 160

2010 Census Coverage Measurement Person Results for Prince George's County, MD

2010 Census Household Population Count: 844,092

Net Coverage

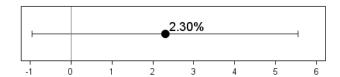
Net undercount is the CCM population estimate minus the census household population count. Percent net undercount is the net undercount divided by the CCM population estimate. A negative value is a net overcount.

Net Undercount: 19,900 (17,500 RMSE) 90% confidence interval: -8,800 to 48,600



Net undercount estimate is not significantly different from 0

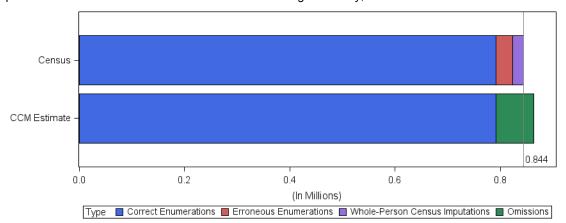
Percent Net Undercount: 2.30% (1.97% RMSE) 90% confidence interval: -0.95% to 5.55%



Percent net undercount estimate is not significantly different from 0

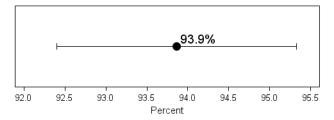
Components of Census Coverage

Correct enumerations are persons who should have been counted anywhere in Prince George's County, MD. Erroneous enumerations include duplicate enumerations and persons who should not have been counted in Prince George's County, MD. Whole-person census imputations are census records that required all of their characteristics to be imputed. Omissions are persons who should have been counted in Prince George's County, MD but were not.

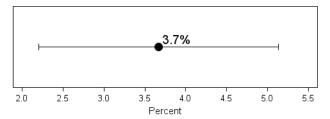


Census Components (Percent of Census Count)

Correct Enumerations: 93.9% (0.9% SE) 90% confidence interval: 92.4% to 95.3%



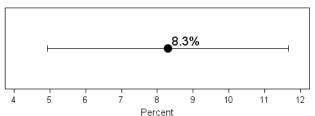
Erroneous Enumerations: 3.7% (0.9% SE) 90% confidence interval: 2.2% to 5.1%



Whole-Person Census Imputations: 2.5% Whole-person census imputations are tallied, not estimated. Therefore the percentage is not subject to sampling error.

Omission Percentage (Percent of CCM Estimate)

Omissions: 8.3% (2.0% RMSE) 90% confidence interval: 4.9% to 11.7%



Note: For the estimates of correct and erroneous enumerations, the standard error is an estimate of the sampling error. For estimates of the net undercount, percent net undercount, and omissions percentage, we provide estimates of the root mean squared error. These estimates of error add an estimate of the synthetic bias to the sampling error of the point estimates.



Source: 2010 Census Coverage Measurement

Exhibit 24

U.S. Census Monitoring Board

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August 7, 2001 - PricewaterhouseCoopers Census Study: CENSUS 2000 UNDERCOUNT COULD COST STATES BILLIONS



These estimates show the effect of the Census 2000 undercount on federal funding of eight major programs over a ten year period, 2002-20012. The eight programs are Medicaid, Foster Care, Rehabilitation Services Basic Support, Child Care and Development Block Grant, Social Services Block Grant, Substance Abuse Prevention and Treatment Block Grant, Adoption Assistance, and Vocational Education Basic Grants.

State Estimated 2000 Census Undercount:

State	ı	Undercount		Undercount Rate ³				
United States	State/ USTotal ¹ 3,355,585	Over18 ² 2,213,342	Under18² 1,142,243	State/ USTotal 1.18	Over18 1.05	Under18 <i>1.56</i>		
Maryland	75,204	50,559	24,645	1.40	1.27	1.78		

Selected County Estimated 2000 Census Undercount:

	2000 Population	Estimated Undercount			
State, County	Unadjusted Count ¹	Adjusted Count ²	Number ³	Rate ⁴	
Total, All 112 Selected Counties	125,460,358	127,081,879	1,621,521	1.28	
Maryland	5,296,486	5,371,690	75,204	1.40	
Baltimore City ⁵	651,154	664,993	13,839	2.08	
Baltimore County	754,292	763,672	9,380	1.23	
Montgomery County	873,341	885,453	12,112	1.37	
Prince George's County	801,515	817,093	15,578	1.91	

¹Source: U.S. Census Bureau, Census 2000 Redistricting Data (P.L. 94-171) Summary File, Table 1.

Estimated Effect of 2000 Census Undercount On Federal Funding for the State (thousands of dollars):

State	2002	2003	2004	2005	2006	2007	2002-2012
Maryland	-406	-514	-525	-535	-546	-557	-5,545
Total, United States	0	-31,924	-34,726	-37,826	-41,114	-44,693	-478,297
Funding Gains	16,436	245,656	265,865	288,148	311,756	319,336	3,594,843
Funding Losses	-16,436	-277,580	-300,591	-325,974	-352,870	-364,028	-4,073,140

Source: PricewaterhouseCoopers calculations.

Estimated Effect of 2000 Census Undercount On Federal Funding By Selected County:

State, County

Between-State Effects Within-State Effects (Thousands)

(Thousands)

Net Effect Amount Percent¹ (Thousands)

¹Source: Dr. Eugene Ericksen, "Estimates of State and County Undercount Rates," May 1, 2001.

²PricewaterhouseCoopers calculations based on undercount rates provided by Dr. Ericksen.

³Undercount as a percent of adjusted population. U.S. Census Bureau and Dr. Eugene Ericksen, "Estimates of State and County Undercount Rates," May 1, 2001.

²Equals unadjusted population count plus undercount.

³Equals adjusted minus unadjusted 2000 population projections.

⁴Undercount as a percent of adjusted population. U.S. Census Bureau and Dr. Eugene Ericksen, "Estimates of State and County Undercount Rates," May 1, 2001.

⁵Baltimore City is an independent city (i.e., it is independent of any county organization).

⁶Richmond County is included in order to comprise the 5 counties of New York City.

Maryland

Baltimore City ²	-682	-28,288	-28,970	-0.7%
Baltimore County	-790	8,194	7,404	0.2%
Montgomery County	-914	1,773	859	*
Prince George's County	-839	-25,851	-26,690	-0.5%

Source: PricewaterhouseCoopers calculations.

Back to Top

U.S. Census Monitoring Board 4700 Silver Hill Road Phone: (301) 457-9900 **Presidential Members**

Suite 1250 - 3

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Suitland, MD 20746 comments@cmbp.census.gov

^{*} Denotes less than 0.05%.

 $^{^{1}\}mathrm{Net}$ effect as a percent of the adjusted funding level under the eight programs over 2002-2012

 $^{^2}$ Baltimore City is an independent city (i.e., it is independent of any county organization).

³Richmond County is included in order to comprise the 5 counties of New York city.

Exhibit 25

<u>Maryland</u>Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 119 of 160

		Tot	al		<u>Under 18 Years</u>					
			— Net				 Net			
	Adjusted	Official	Undercount	Rate	Adjusted	Official	Undercount	Rate		
<u>Maryland</u>										
Total	4,882,452	4,781,468	100,984	2.1%	1,214,380	1,162,241	52,139	4.3%		
White	3,438,148	3,393,964	44,184	1.3%	792,329	765,441	26,888	3.4%		
Black	1,241,091	1,189,899	51,192	4.1%	364,412	341,106	23,306	6.4%		
AIEA	13,278	12,972	306	2.3%	3,598	3,412	186	5.2%		
API	141,616	139,719	1,897	1.3%	39,256	38,472	784	2.0%		
Other	48,319	44,914	3,405	7.0%	14,785	13,810	975	6.6%		
Hispanic Origin	133,101	125,102	7,999	6.0%	38,655	36,311	2,344	6.1%		
Allegany County										
Total	75,892	74,946	946	1.2%	16,874	16,365	509	3.0%		
White	73,852	72,955	897	1.2%	16,218	15,738	480	3.0%		
Black	1,575	1,535	40	2.5%	490	463	27	5.5%		
AIEA	60	59	1	1.7%	10	10	0	0.0%		
API	327	321	6	1.8%	118	117	1	0.8%		
Other	78	76	2	2.6%	38	37	1	2.6%		
Hispanic Origin	335	319	16	4.8%	107	102	5	4.7%		
Anne Arundel County										
Total	434,458	427,239	7,219	1.7%	109,313	105,188	4,125	3.8%		
White	371,024	365,953	5,071	1.4%	90,798	87,746	3,052	3.4%		
Black	52,379	50,525	1,854	3.5%	15,308	14,354	954	6.2%		
AIEA	1,321	1,292	29	2.2%	330	317	13	3.9%		
API	7,819	7,675	144	1.8%	2,206	2,150	56	2.5%		
Other	1,915	1,794	121	6.3%	671	621	50	7.5%		
Hispanic Origin	7,194	6,815	379	5.3%	2,275	2,141	134	5.9%		
Baltimore County										
Total	702,814	692,134	10,680	1.5%	157,541	151,162	6,379	4.0%		
White	594,206	587,898	6,308	1.1%	125,639	121,100	4,539	3.6%		
Black	89,419	85,451	3,968	4.4%	26,342	24,662	1,680	6.4%		
AIEA	1,509	1,468	41	2.7%	409	383	26	6.4%		
API	15,783	15,544	239	1.5%	4,535	4,440	95	2.1%		
Other	1,897	1,773	124	6.5%	616	577	39	6.3%		
Hispanic Origin	8,604	8,131	473	5.5%	2,426	2,289	137	5.6%		
Calvert County										
Total	52,182	51,372	810	1.6%	15,136	14,600	536	3.5%		
White	43,327	42,825	502	1.2%	12,470	12,100	370	3.0%		
Black	8,349	8,046	303	3.6%	2,512	2,350	162	6.4%		
AIEA	128	127	1	0.8%	24	23	1	4.2%		
API	294	292	2	0.7%	95	93	2	2.1%		
Other	84	82	2	2.4%	35	34	1	2.9%		
Hispanic Origin	531	502	29	5.5%	197	187	10	5.1%		

<u>Maryland</u>Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 120 of 160

		<u>Tot</u>	പ		Under 18 Years					
		<u>101</u>	<u>aı</u> Net			Ulluel 10	Net			
	Adjusted	Official	Undercount	Rate	Adjusted	Official	Undercount	Rate		
Caroline County										
Total	27,507	27,035	472	1.7%	7,374	7,100	274	3.7%		
White	22,666	22,355	311	1.4%	5,869	5,693	176	3.0%		
Black	4,609	4,459	150	3.3%	1,435	1,339	96	6.7%		
AIEA	58	58	0	0.0%	19	18	1	5.3%		
API	80	79	1	1.3%	32	31	1	3.1%		
Other	94	84	10	10.6%	19	19	0	0.0%		
Hispanic Origin	252	231	21	8.3%	92	85	7	7.6%		
Carroll County										
Total	124,933	123,372	1,561	1.2%	33,747	32,770	977	2.9%		
White	120,818	119,336	1,482	1.2%	32,621	31,688	933	2.9%		
Black	2,997	2,933	64	2.1%	742	704	38	5.1%		
AIEA	197	192	5	2.5%	59	56	3	5.1%		
API	743	747	-4	-0.5%	252	253	-1	-0.4%		
Other	178	164	14	7.9%	73	69	4	5.5%		
Hispanic Origin	945	903	42	4.4%	339	330	9	2.7%		
Cecil County										
Total	72,549	71,347	1,202	1.7%	20,258	19,508	750	3.7%		
White	68,530	67,450	1,080	1.6%	19,014	18,330	684	3.6%		
Black	3,337	3,240	97	2.9%	1,026	969	57	5.6%		
AIEA	154	150	4	2.6%	41	39	2	4.9%		
API	312	310	2	0.6%	108	106	2	1.9%		
Other	216	197	19	8.8%	69	64	5	7.2%		
Hispanic Origin	682	635	47	6.9%	245	229	16	6.5%		
Charles County										
Total	102,795	101,154	1,641	1.6%	30,781	29,756	1,025	3.3%		
White	81,237	80,234	1,003	1.2%	23,772	23,137	635	2.7%		
Black	19,024	18,419	605	3.2%	6,140	5,771	369	6.0%		
AIEA	778	761	17	2.2%	235	224	11	4.7%		
API	1,342	1,338	4	0.3%	479	473	6	1.3%		
Other	414	402	12	2.9%	155	151	4	2.6%		
Hispanic Origin	1,746	1,705	41	2.3%	642	635	7	1.1%		
Dorchester County										
Total	30,762	30,236	526	1.7%	7,239	6,917	322	4.4%		
White	21,786	21,548	238	1.1%	4,505	4,359	146	3.2%		
Black	8,708	8,423	285	3.3%	2,653	2,479	174	6.6%		
AIEA	52	51	1	1.9%	16	15	1	6.3%		
API	137	138	-1	-0.7%	36	36	0	0.0%		
Other	79	76	3	3.8%	29	28	1	3.4%		
Hispanic Origin	190	177	13	6.8%	63	58	5	7.9%		

<u>Maryland</u>Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 121 of 160

		<u>Tot</u>			I	<u>Under 18</u>		
	Adjusted	Official	Net Undercount	Rate	Adjusted	Official	Net Undercount	Rate
Frederick County	Aujusteu	Official	Chacreount	Rate	Aujusteu	Official	Chacreount	Rate
Total	152,696	150,208	2,488	1.6%	40,993	39,731	1,262	3.1%
White	142,088	139,909	2,179	1.5%	37,754	36,654	1,100	2.9%
Black	8,257	8,010	247	3.0%	2,465	2,324	141	5.7%
AIEA	290	284	6	2.1%	93	91	2	2.2%
API	1,543	1,510	33	2.1%	486	475	11	2.3%
Other	518	495	23	4.4%	195	187	8	4.1%
Hispanic Origin	1,791	1,713	78	4.4%	587	566	21	3.6%
Garrett County								
Total	28,518	28,138	380	1.3%	7,863	7,620	243	3.1%
White	28,341	27,963	378	1.3%	7,767	7,524	243	3.1%
Black	106	105	1	0.9%	68	68	0	0.0%
AIEA	22	22	0	0.0%	10	10	0	0.0%
API	41	40	1	2.4%	14	14	0	0.0%
Other	8	8	0	0.0%	4	4	0	0.0%
Hispanic Origin	121	110	11	9.1%	54	49	5	9.3%
Harford County								
Total	185,024	182,132	2,892	1.6%	50,569	48,782	1,787	3.5%
White	164,751	162,559	2,192	1.3%	43,989	42,578	1,411	3.2%
Black	16,139	15,530	609	3.8%	5,246	4,909	337	6.4%
AIEA	505	490	15	3.0%	143	135	8	5.6%
API	2,523	2,503	20	0.8%	797	783	14	1.8%
Other	1,106	1,050	56	5.1%	394	377	17	4.3%
Hispanic Origin	2,968	2,821	147	5.0%	1,046	989	57	5.4%
Howard County								
Total	190,432	187,328	3,104	1.6%	50,214	48,482	1,732	3.4%
White	157,981	155,899	2,082	1.3%	40,826	39,549	1,277	3.1%
Black	22,928	22,019	909	4.0%	6,331	5,934	397	6.3%
AIEA	413	402	11	2.7%	103	94	9	8.7%
API	8,133	8,098	35	0.4%	2,610	2,576	34	1.3%
Other	977	910	67	6.9%	344	329	15	4.4%
Hispanic Origin	3,911	3,699	212	5.4%	1,271	1,201	70	5.5%
Kent County	10.015	4= 0.4	40.4			• 00-	400	
Total	18,246	17,842	404	2.2%	3,988	3,805	183	4.6%
White	14,357	14,085	272	1.9%	2,933	2,817	116	4.0%
Black	3,643	3,534	109	3.0%	971	911	60	6.2%
AIEA	30	29	1	3.3%	3	3	0	0.0%
API	70	68	2	2.9%	21	22	-1	-4.8%
Other	146	126	20	13.7%	60	52	8	13.3%
Hispanic Origin	533	467	66	12.4%	150	129	21	14.0%

<u>Maryland</u>Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 122 of 160

		Tot	al		Under 18 Years					
		<u>Tot</u>								
	Adjusted	Official	Net Undercount	Rate	Adjusted	Official	Net Undercount	Rate		
Montgomery County	· ·				,					
Total	771,174	757,027	14,147	1.8%	185,316	178,244	7,072	3.8%		
White	588,217	580,635	7,582	1.3%	133,178	128,704	4,474	3.4%		
Black	96,745	92,267	4,478	4.6%	27,476	25,674	1,802	6.6%		
AIEA	1,886	1,841	45	2.4%	461	437	24	5.2%		
API	62,446	61,981	465	0.7%	17,686	17,374	312	1.8%		
Other	21,880	20,303	1,577	7.2%	6,515	6,055	460	7.1%		
Hispanic Origin	59,353	55,684	3,669	6.2%	16,723	15,668	1,055	6.3%		
Prince George's County										
Total	751,595	729,268	22,327	3.0%	187,625	177,945	9,680	5.2%		
White	319,145	314,616	4,529	1.4%	61,911	59,545	2,366	3.8%		
Black	385,855	369,791	16,064	4.2%	113,455	106,623	6,832	6.0%		
AIEA	2,380	2,339	41	1.7%	604	581	23	3.8%		
API	28,818	28,255	563	2.0%	7,185	7,015	170	2.4%		
Other	15,397	14,267	1,130	7.3%	4,470	4,181	289	6.5%		
Hispanic Origin	32,060	29,983	2,077	6.5%	8,999	8,434	565	6.3%		
Queen Anne's County								_		
Total	34,468	33,953	515	1.5%	8,662	8,341	321	3.7%		
White	30,299	29,911	388	1.3%	7,517	7,268	249	3.3%		
Black	3,962	3,839	123	3.1%	1,083	1,013	70	6.5%		
AIEA	46	45	1	2.2%	9	8	1	11.1%		
API	123	125	-2	-1.6%	40	40	0	0.0%		
Other	38	33	5	13.2%	13	12	1	7.7%		
Hispanic Origin	203	189	14	6.9%	64	59	5	7.8%		
St. Mary's County										
Total	77,611	75,974	1,637	2.1%	22,382	21,553	829	3.7%		
White	65,367	64,129	1,238	1.9%	18,519	17,919	600	3.2%		
Black	10,633	10,275	358	3.4%	3,345	3,132	213	6.4%		
AIEA	274	268	6	2.2%	83	79	4	4.8%		
API	943	928	15	1.6%	300	292	8	2.7%		
Other	394	374	20	5.1%	135	131	4	3.0%		
Hispanic Origin	1,306	1,230	76	5.8%	468	441	27	5.8%		
Somerset County										
Total	23,853	23,440	413	1.7%	4,976	4,727	249	5.0%		
White	14,430	14,282	148	1.0%	2,955	2,852	103	3.5%		
Black	9,194	8,943	251	2.7%	1,979	1,836	143	7.2%		
AIEA	47	47	0	0.0%	10	10	0	0.0%		
API	100	96	4	4.0%	14	13	1	7.1%		
Other	82	72	10	12.2%	18	16	2	11.1%		
Hispanic Origin	252	229	23	9.1%	65	58	7	10.8%		

<u>Maryland</u>Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 123 of 160

		<u>Tot</u>			<u>Under 18 Years</u>					
	Adjusted	Official	Net Undercount	Rate	Adjusted	Official	Net Undercount	Rate		
Talbot County					,					
Total	31,030	30,549	481	1.6%	6,689	6,433	256	3.8%		
White	25,141	24,833	308	1.2%	5,167	5,006	161	3.1%		
Black	5,666	5,502	164	2.9%	1,436	1,345	91	6.3%		
AIEA	43	42	1	2.3%	7	6	1	14.3%		
API	103	102	1	1.0%	42	41	1	2.4%		
Other	77	70	7	9.1%	37	35	2	5.4%		
Hispanic Origin	175	167	8	4.6%	58	57	1	1.7%		
Washington County										
Total	123,259	121,393	1,866	1.5%	28,542	27,536	1,006	3.5%		
White	114,517	112,828	1,689	1.5%	26,695	25,801	894	3.3%		
Black	7,379	7,245	134	1.8%	1,371	1,283	88	6.4%		
AIEA	245	241	4	1.6%	49	47	2	4.1%		
API	812	793	19	2.3%	289	279	10	3.5%		
Other	306	286	20	6.5%	138	126	12	8.7%		
Hispanic Origin	957	905	52	5.4%	359	330	29	8.1%		
Wicomico County										
Total	75,889	74,339	1,550	2.0%	18,908	18,110	798	4.2%		
White	57,645	56,755	890	1.5%	13,072	12,654	418	3.2%		
Black	17,192	16,573	619	3.6%	5,525	5,157	368	6.7%		
AIEA	141	137	4	2.8%	36	34	2	5.6%		
API	691	671	20	2.9%	193	188	5	2.6%		
Other	220	203	17	7.7%	82	77	5	6.1%		
Hispanic Origin	660	610	50	7.6%	193	179	14	7.3%		
Worcester County										
Total	35,639	35,028	611	1.7%	8,029	7,697	332	4.1%		
White	27,608	27,253	355	1.3%	5,538	5,368	170	3.1%		
Black	7,711	7,467	244	3.2%	2,377	2,220	157	6.6%		
AIEA	72	72	0	0.0%	12	12	0	0.0%		
API	168	163	5	3.0%	65	63	2	3.1%		
Other	80	73	7	8.8%	37	34	3	8.1%		
Hispanic Origin	292	275	17	5.8%	85	80	5	5.9%		
Baltimore city										
Total	759,126	736,014	23,112	3.0%	191,361	179,869	11,492	6.0%		
White	290,815	287,753	3,062	1.1%	53,602	51,311	2,291	4.3%		
Black	455,284	435,768	19,516	4.3%	134,636	125,586	9,050	6.7%		
AIEA	2,627	2,555	72	2.7%	832	780	52	6.3%		
API	8,265	7,942	323	3.9%	1,653	1,598	55	3.3%		
Other	2,135	1,996	139	6.5%	638	594	44	6.9%		
Hispanic Origin	8,040	7,602	438	5.4%	2,147	2,015	132	6.1%		

Exhibit 26



For Prince George's, the Census Can Pay Off

By Tracey A. Reeves March 8, 2000

A word to Prince George's County residents: If a stranger comes knocking on your door wanting to ask nosy questions about things like your age, race and income, answer them.

If you get a form in the mail asking for the same information, don't throw it away. What you tell both of these sources could translate into hundreds of millions of dollars for the county.

That's the message that Elizabeth M. Hewlett, chairman of the county Planning Board, gave Friday to the county's delegates to the Maryland General Assembly.

Hewlett, speaking before the delegation Friday, said that Prince George's lost an undetermined amount of money because the 1990 Census undercounted about 22,327 residents. Statewide, 100,984 people were undercounted.

Had the census count been more accurate, the county could have received \$20 million a year or a total of \$200 million in grants and loans over the past decade, Hewlett said.

"It's easy money," Hewlett said.

Hewlett said the county is especially interested in making sure that its non-English-speaking residents are counted. Hispanics, in particular, some of whom are living in the United States illegally, tend to shy away from such questionnaires because they fear the census could lead to deportation.

Census counts, which the federal government must take every 10 years, are important because the information gleaned from them is used to determine everything from the numbers of representatives states send to Congress to how much money communities receive for schools, roads, transportation, housing and a host of social programs.

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In addition to asking that residents make same that the the the theory are counted, previous first and pay as much as \$12 an hour.

Looking for Help on Route 1

Proposing legislation is easy. It's garnering support that can get tricky.

Just ask Del. John A. Giannetti Jr., who recently ran into some harsh criticism from fellow members of the Prince George's House delegation when he asked for their support on a bill he's sponsoring that speaks more to Howard County than it does to Prince George's.

- Giannetti, a Democrat who represents Laurel--which is in both Prince George's and Howard--arrived at the weekly delegation meeting in Annapolis on Friday upbeat and ready to pitch his bill for a statewide task force to study ways to revitalize Route 1.
- But by the end of the morning meeting, even though he had won the support he wanted, he was shaking his head in disbelief at the energy he had just exerted trying to convince his colleagues that a yes vote for his proposal was right.
- Critics of Giannetti's bill said it's not that they don't want to improve the run-down corridor. Nor are the legislators bothered by the fact that a task force is being sought even after others have dissected the unsightly road, with its miles of strip malls, billboards and fast-food eateries, but done nothing to enhance its condition.
- What bothers some county lawmakers about Giannetti's proposal is that it would study only that part of Route 1 that runs from the Capital Beltway at College Park to the Baltimore Beltway near Linthicum--and most of that is in Howard.
- The proposal, which needs the blessing of the full state legislature, calls for the task force to investigate and recommend ways to redevelop the corridor.
- The recommendations would have to be completed by next year's legislative session.
- "I agree with this motion, but I want to be in on it, too," said Anne Healey (D-Hyattsville), whose district includes Route 1. "We have serious concerns about Route 1 inside the Beltway. It's been studied before, but it's never been part of a statewide effort. I think we should be included."
- Because the bill is not sponsored by the Prince George's County delegation, it does not need a vote from the delegation. But Giannetti said he brought his proposal to the Prince George's delegation in hopes that the added support would boost the bill's fortunes.

Healey and other delegation members, hieraring that W. Phantow (D-169 and Darren M98 wan QD-169 wie), were among those who said that any statewide look at Route 1 should include the entire length of the road from Mount Rainier at the District line to Baltimore.

"Before I can support it, we have to be included," Palumbo sniped. "How can we not?"

Giannetti countered that he is not opposed to repairing all of Route 1. Rather, he said his proposal "has to start and stop somewhere."

"If this body does not want to weigh in on [the bill], I will submit an amendment to not include Prince George's. That's why things get done," an agitated Giannetti said after it appeared that his request would be referred to a House committee for review. "The county executive likes the bill. The governor likes the bill. It's part of his smart growth plan."

Healey and Palumbo later softened, saying they would support Giannetti's effort, but only if he made the task force aware of his colleagues' desire to look at all of Route 1, not just a portion of it.

In the end, Giannetti's forceful argument was enough to kill the motion that would have sent the bill to a committee, and he won the unanimous support of the Prince George's delegation for his measure. But it was a hard-fought battle--one that Giannetti later said was tougher than he thought it would be.

"I knew there would be some apprehension, but I didn't think it would be like this," Giannetti said. "I'd say getting this done was akin to pulling teeth."

Comments The Washington Post We dig deeper. Original reporting, exclusive scoops and more. Subscribe for \$1.

Exhibit 27

May 22, 2012

DSSD 2010 CENSUS COVERAGE MEASUREMENT MEMORANDUM SERIES #2010-G-03

MEMORANDUM FOR David C. Whitford

Chief, Decennial Statistical Studies Division

From: Patrick J. Cantwell (Signed)

Assistant Division Chief, Sampling and Estimation

Decennial Statistical Studies Division

Prepared by: Peter P. Davis

James Mulligan

Decennial Statistical Studies Division

Subject: 2010 Census Coverage Measurement Estimation Report: Net

Coverage for the Household Population in the United States

This report is one of twelve documents providing estimation results from the 2010 Census Coverage Measurement program. This report provides net coverage estimates for the household population in the United States showing undercount and overcount.

For more information, contact Peter Davis on (301) 763-4291 or James Mulligan on (301) 763-1978.

Attachments

cc:

DSSD CCM Contacts List

Census Coverage Measurement Estimation Report

Net Coverage for the Household Population in the United States

Prepared by Peter P. Davis James Mulligan

Decennial Statistical Studies Division

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 131 of 160

Attachment 1

Attachment 1: Net Coverage for Counties with Total Population Greater than 100,000 – 2010 and 2000

Attachment 1: Net	Coverage for Counties with Total Population Greater than 100,000 – 2010 and 2000								
		NT .	2010	D (N)	D 111	N T 4		00	G. 1 1
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard
State and County (FIPS Code)	Count (×1000)	Undercount (×1000)	Squared Error (×1000)	Undercount (%)	Squared Error (%)	Undercount (×1000)	Error (×1000)	Undercount (%)	Error (%)
State and County (1 if 5 Code)	(^1000)	(^1000)	(^1000)	(70)	(70)	(^1000)	(^1000)	(70)	(70)
Alabama (01)	4,663.9	6.2	58.1	0.13	1.24	-14.9	11.8	-0.35	0.27
Baldwin County (003)	180.0	0.5	5.2	0.13	2.87	-1.5	0.4	-1.12	0.27
Calhoun County (015)	115.7	0.7	3.7	0.61	3.16	-0.8	0.4	-0.74	0.32
Etowah County (055)	102.3	0.7	3.3	0.01	3.25	-0.8	0.4	-1.38	0.33
Houston County (069)	102.3	0.5	3.3	0.23	3.23	-1.4 -0.5	0.3	-0.54	0.34
3 ()				0.53					
Jefferson County (073)	642.7	3.9	13.8		2.12	1.4	1.9	0.21	0.29
Lee County (081)	135.8	1.5	4.2	1.10	3.05	0.5	0.5	0.45	0.40
Madison County (089)	326.8	1.0	8.1	0.32	2.45	0.6	1.0	0.21	0.35
Mobile County (097)	406.2	0.4	9.6	0.10	2.37	1.4	1.2	0.37	0.30
Montgomery County (101)	220.3	3.9	6.3	1.73	2.75	0.1	0.8	0.07	0.40
Morgan County (103)	117.4	-0.3	3.6	-0.26	3.12	-0.6	0.4	-0.56	0.36
Shelby County (117)	192.5	-0.3	5.3	-0.16	2.78	-1.3	0.4	-0.96	0.31
Tuscaloosa County (125)	184.2	2.5	5.4	1.34	2.85	-0.4	0.5	-0.28	0.35
Balance of Alabama	1,940.0	-8.4	36.7	-0.44	1.91	-12.4	4.9	-0.67	0.27
Alaska (02)	629.1	-5.3	13.8	-0.85	2.22	1.8	3.0	0.33	0.54
Anchorage Municipality (020)	283.4	1.6	7.4	0.57	2.59	0.8	1.2	0.33	0.47
Balance of Alaska	345.7	-6.9	11.4	-2.04	3.44	1.0	1.0	0.34	0.32
Arizona (04)	6,252.6	-26.2	73.9	-0.42	1.19	-16.5	18.3	-0.33	0.37
Cochise County (003)	125.1	0.2	4.1	0.18	3.25	0.5	0.6	0.45	0.49
Coconino County (005)	125.6	1.3	4.0	1.01	3.14	0.4	0.6	0.35	0.56
Maricopa County (013)	3,763.9	-14.0	55.5	-0.37	1.49	-9.0	12.4	-0.30	0.41
Mohave County (015)	197.6	-6.1	6.0	-3.20	3.24	-2.4	0.6	-1.56	0.39
Navajo County (017)	105.2	0.5	3.7	0.46	3.45	0.0	0.8	-0.02	0.87
Pima County (019)	956.1	-3.4	18.8	-0.35	1.98	-6.0	2.7	-0.74	0.33
Pinal County (021)	349.5	-5.3	8.7	-1.55	2.58	-0.4	1.1	-0.25	0.68
Yavapai County (025)	207.5	-1.9	5.8	-0.94	2.84	-0.8	1.1	-0.52	0.67
Yuma County (027)	189.8	0.8	5.5	0.44	2.86	1.6	1.4	1.02	0.87
Balance of Arizona	232.3	1.8	9.0	0.77	3.81	-0.3	0.7	-0.12	0.33
Arkansas (05)	2,837.0	-11.5	40.7	-0.41	1.45	-2.5	7.8	-0.10	0.30
Benton County (007)	219.3	0.1	6.1	0.06	2.76	-0.4	0.5	-0.26	0.34
Faulkner County (045)	109.2	-0.6	3.4	-0.54	3.19	-0.2	0.2	-0.23	0.29
Pulaski County (119)	374.8	1.7	9.1	0.44	2.39	1.5	1.0	0.42	0.28
Saline County (125)	105.7	-0.7	3.4	-0.70	3.22	-0.1	0.3	-0.17	0.38
Sebastian County (131)	123.5	0.3	3.9	0.26	3.12	0.0	0.4	0.03	0.33
Washington County (143)	195.5	1.5	5.6	0.75	2.81	0.3	0.5	0.20	0.33
Balance of Arkansas	1,709.0	-13.7	34.2	-0.81	2.03	-3.6	4.5	-0.22	0.27
Butunee of Arkansus	1,700.0	15.7	54.2	0.01	2.03	5.0	7.5	0.22	0.27
California (06)	36,434.1	95.6	265.6	0.26	0.73	44.1	87.1	0.13	0.26
Alameda County (001)	1,472.8	5.2	26.3	0.35	1.77	0.8	4.3	0.06	0.30
Butte County (007)	215.1	1.5	6.0	0.67	2.73	-0.9	0.7	-0.48	0.36
Contra Costa County (013)	1,038.7	0.6	19.9	0.07	1.91	-4.4	2.6	-0.47	0.38
2 \ /	1,038.7	-1.9	5.1	-1.09	2.89	-4.4 -0.9	0.6		0.28
El Dorado County (017) Fresno County (019)	912.9	3.6	18.3	0.40	1.99	3.6	2.7	-0.56 0.46	0.41
* * *									
Humboldt County (023)	129.6	-0.3	4.2	-0.23	3.26	-0.2	0.5	-0.13	0.41
Imperial County (025)	163.8	2.6	4.9	1.59	2.92	2.1	1.1	1.61	0.79
Kern County (029)	802.9	-0.4	16.5	-0.05	2.06	0.9	2.4	0.14	0.38
Kings County (031)	131.4	2.1	4.1	1.57	3.01	1.1	0.5	1.02	0.45
Los Angeles County (037)	9,646.9	49.2	116.2	0.51	1.19	53.0	29.3	0.56	0.31
Madera County (039)	142.2	0.8	4.3	0.58	2.97	-1.6	0.5	-1.37	0.41
Marin County (041)	243.4	-0.7	6.4	-0.29	2.66	-1.8	0.7	-0.78	0.32
Merced County (047)	250.9	4.4	6.8	1.71	2.61	2.6	1.0	1.23	0.46
Monterey County (053)	396.4	7.8	9.9	1.93	2.39	2.7	1.9	0.71	0.49
Napa County (055)	131.6	-0.2	4.0	-0.13	3.04	-0.7	0.4	-0.57	0.31

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 132 of 160

			2010			2000				
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard	
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error	
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)	
Orange County (059)	2,971.0	4.0	45.5	0.14	1.53	2.0	8.3	0.07	0.30	
Placer County (061)	344.6	-2.5	8.4	-0.73	2.47	-1.6	1.0	-0.64	0.42	
Riverside County (065)	2,153.8	-2.6	35.4	-0.12	1.65	-3.1	4.3	-0.20	0.29	
Sacramento County (067)	1,395.0	-0.2	25.3	-0.01	1.82	-2.4	3.9	-0.20	0.33	
San Bernardino County (071)	1,995.2	2.5	33.2	0.13	1.66	-1.2	4.8	-0.07	0.29	
San Diego County (073)	2,993.3	-2.8	46.4	-0.09	1.55	5.6	8.1	0.21	0.30	
San Francisco County (075)	781.0	0.6	16.1	0.07	2.06	-1.1	2.9	-0.15	0.38	
San Joaquin County (077)	671.0	1.2	14.3	0.17	2.13	-2.0	2.4	-0.37	0.45	
San Luis Obispo County (079)	252.6	2.3	6.7	0.89	2.62	0.1	0.8	0.06	0.35	
San Mateo County (081)	709.6	1.2	14.8	0.17	2.08	-2.7	2.1	-0.38	0.31	
Santa Barbara County (083)	406.1	7.9	9.9	1.90	2.36	2.3	1.6	0.61	0.42	
Santa Clara County (085)	1,751.3	5.8	30.0	0.33	1.70	-6.7	5.5	-0.41	0.33	
Santa Cruz County (087)	251.4	0.3	6.6	0.13	2.63	-0.9	0.8	-0.36	0.32	
Shasta County (089)	174.6	0.4	5.0	0.23	2.87	-0.7	0.5	-0.45	0.34	
Solano County (095)	400.9	-0.2	9.5	-0.05	2.37	-0.6	1.2	-0.16	0.33	
Sonoma County (097)	473.8	-1.3	10.8	-0.27	2.30	-2.1	1.5	-0.48	0.33	
Stanislaus County (099)	508.1	-0.5	11.4	-0.10	2.25	0.9	1.7	0.20	0.39	
Tulare County (107)	437.4	7.6	10.5	1.71	2.33	2.5	1.8	0.67	0.49	
Ventura County (111)	812.7	1.4	16.5	0.17	2.02	-1.7	2.1	-0.23	0.29	
Yolo County (113)	194.1	0.7	5.4	0.37	2.77	0.2	0.5	0.12	0.31	
Balance of California	898.5	-4.6	22.3	-0.52	2.51	0.8	2.4	0.09	0.29	
Dulinio of Cumorina	0,0.5		22.5	0.02	2.51	0.0		0.03	0.2	
Colorado (08)	4,913.3	-14.1	59.9	-0.29	1.23	-0.3	14.2	-0.01	0.34	
Adams County (001)	437.6	0.3	10.1	0.07	2.31	-1.9	1.4	-0.53	0.40	
Arapahoe County (005)	567.1	-0.1	12.4	-0.02	2.19	-1.5	1.5	-0.32	0.31	
Boulder County (013)	285.6	-0.7	7.3	-0.24	2.56	-1.8	0.9	-0.65	0.32	
Denver County (013)	584.2	2.4	12.8	0.40	2.17	-1.2	1.9	-0.23	0.35	
Douglas County (035)	284.8	-1.1	7.2	-0.38	2.56	-0.3	0.6	-0.19	0.36	
El Paso County (041)	603.1	-2.8	13.0	-0.47	2.17	1.2	1.8	0.24	0.37	
Jefferson County (059)	527.1	-0.9	11.7	-0.17	2.23	-2.8	1.8	-0.54	0.35	
Larimer County (069)	291.1	1.4	7.5	0.47	2.54	0.7	1.1	0.29	0.46	
Mesa County (077)	143.1	0.4	4.3	0.25	2.98	0.1	0.5	0.06	0.43	
Pueblo County (101)	154.7	1.1	4.6	0.74	2.92	0.1	0.6	0.06	0.41	
Weld County (123)	246.9	-0.7	6.5	-0.27	2.64	2.2	1.0	1.24	0.58	
Balance of Colorado	787.9	-13.3	20.8	-1.71	2.73	5.0	2.0	0.75	0.29	
Bulance of Colorado	707.5	13.3	20.0	1.71	2.75	3.0	2.0	0.75	0.27	
Connecticut (09)	3,455.9	-15.6	45.8	-0.45	1.34	-25.3	8.2	-0.77	0.25	
Fairfield County (001)	897.7	-4.6	17.6	-0.51	1.99	-4.9	2.5	-0.57	0.29	
Hartford County (003)	865.8	-5.3	17.5	-0.61	2.05	-7.8	3.3	-0.94	0.40	
Litchfield County (005)	187.1	0.3	5.5	0.16	2.92	-2.3	0.6	-1.28	0.35	
Middlesex County (007)	160.6	-0.9	4.6	-0.59	2.93	-1.2	0.5	-0.80	0.35	
New Haven County (009)	833.3	-4.1	16.7	-0.49	2.02	-5.0	2.3	-0.63	0.29	
New London County (011)	261.3	0.6	7.3	0.25	2.76	-0.9	1.1	-0.37	0.44	
Tolland County (013)	136.6	-0.7	4.1	-0.48	3.03	-1.8	0.5	-1.45	0.42	
Windham County (015)	113.7	-1.1	3.6	-0.96	3.20	-1.4	0.4	-1.34	0.39	
Balance of Connecticut										
Delaware (10)	873.5	4.8	17.1	0.55	1.93	-2.5	2.4	-0.33	0.32	
Kent County (001)	158.0	1.1	4.7	0.71	2.95	0.3	0.6	0.22	0.49	
New Castle County (003)	521.3	4.1	11.8	0.77	2.22	-1.7	2.0	-0.35	0.43	
Sussex County (005)	194.2	-0.4	5.5	-0.20	2.84	-1.1	0.6	-0.69	0.37	
Balance of Delaware										
District of Columbia (11)	561.7	12.8	12.9	2.23	2.20	8.9	2.0	1.64	0.36	
Florida (12)	18,379.6	83.4	160.3	0.45	0.86	-102.0	35.5	-0.66	0.23	
Alachua County (001)	233.4	4.2	6.5	1.75	2.71	0.8	1.1	0.39	0.53	
Bay County (005)	165.0	6.9	6.0	4.00	3.37	-0.9	0.5	-0.59	0.32	
3 ()			2.0							

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 133 of 160

Cross Not Squared From Cylaron Cylar				2010			2000				
State and County (FIFFS Code) (-1000) (-		Census		Root Mean	Percent Net	Root Mean				Standard	
Broward County (009)	G I.G			1							
Browned County (011)						\ /					
Charlors County (015)	• ` '										
Cinne County (017)	3 ()										
Clus County (019)	• • • •										
Collier County (021)	3 \ /										
David County (031) S443 2.6 17.1 0.30 2.01 2.2 2.3 0.28 0.30	• • • •										
Escambia County (033)											
Hemanda County (053)	• • •										
Hilbbrough County (067) 12072 6.0 22.6 0.50 1.85 -5.9 2.8 -0.61 0.29 1.06 1.06 1.07 1.05 0.35 1.26 1.07 1.07 1.05 0.35 1.26 1.07 1.											
Indian River County (061)	• • • •										
Lake County (069)										0.35	
Leon County (073)	• • • •	293.1	-0.9	7.4		2.55				0.34	
Manates County (081) 318.0 -0.7 7.9 -0.22 2.51 2.4 0.7 -0.95 0.29 Marian County (085) 142.4 -0.5 4.2 -0.36 2.99 -1.6 0.5 -1.30 0.38 Maini-Dade County (086) 2.456.4 27.0 40.0 1.09 1.59 -5.8 6.6 -0.26 0.33 Okalosas County (095) 1.112.3 7.9 21.4 0.71 1.90 -0.3 2.5 -0.20 0.31 0.30 0.03	Lee County (071)	610.3	-1.8	13.3	-0.30	2.19	-4.0	1.5	-0.92	0.34	
Marion County (083) 323.1 0.1 8.2 0.03 2.55 -1.8 0.7 0.72 0.30 Marini County (086) 2.456.4 2.70 40.0 1.09 1.59 -5.8 6.6 -0.26 0.30 Okaloosa County (091) 175.9 3.6 5.4 2.00 2.93 -0.3 0.5 -0.20 0.31 Oscola County (097) 265.4 0.7 7.0 0.26 2.61 -0.6 0.5 -0.33 0.29 Palm Beach County (097) 2.65.4 0.7 7.0 0.26 2.61 -0.6 0.5 -0.35 0.29 Palm Beach County (101) 459.0 -2.4 10.5 -0.52 2.31 -5.3 1.1 -1.60 0.32 Pinellas County (105) 589.8 0.0 12.9 0.01 2.18 -6.4 1.7 -1.37 0.36 St. Johns County (105) 589.8 0.0 12.9 0.01 2.18 -6.4 1.7 -1.37 0.36 <	Leon County (073)	260.5	5.5	7.2	2.06	2.65	-0.9	0.8	-0.38	0.36	
Martin County (085) 142.4 -0.5 4.2 -0.36 2.99 -1.6 0.5 -1.30 0.38 Miami-Dade County (091) 175.9 3.6 5.4 2.00 2.93 -0.3 0.5 -0.20 0.31 Okalosa County (097) 1.112.3 7.9 21.4 0.71 1.90 -0.3 2.6 -0.03 0.30 Oscoola County (099) 1.300.2 7.3 24.1 0.56 1.83 -9.6 3.1 -0.87 0.28 Paim Beach County (101) 459.0 2.2 1.05 -0.52 2.31 1.1 -1.60 0.32 Pinellas County (103) 896.9 2.2.7 17.8 -0.30 1.99 -9.5 2.6 -1.07 0.03 St. Lucia County (105) 589.8 0.0 12.9 0.01 2.18 -4.17 -1.30 0.36 St. Lucia County (111) 274.7 0.0 7.1 0.01 2.57 -1.2 0.7 0.6 0.36 Sama Rosa	Manatee County (081)	318.0	-0.7	7.9		2.51	-2.4	0.7	-0.95	0.29	
Miami-Dade County (096)	Marion County (083)	323.1	0.1	8.2	0.03	2.55	-1.8	0.7	-0.72	0.30	
Okaloosa Country (091)	3 \ /	142.4		4.2							
Orange County (995)											
Oscala County (097) 265.4 0.7 7.0 0.26 2.61 -0.6 0.5 -0.35 0.29 Palm Beach County (101) 459.0 -2.4 10.5 -0.52 2.31 -5.3 1.1 -1.60 0.32 Pinellas County (103) 896.9 -2.7 17.8 -0.30 1.99 -9.5 2.6 -1.07 0.30 Polk County (109) 187.2 -0.8 5.2 -0.43 2.82 -0.9 0.4 -0.71 -1.37 0.36 St. Lucie County (111) 274.7 -0.8 5.2 -0.43 2.82 -0.9 0.4 -0.71 0.31 St. Lucie County (117) 274.7 -0.0 7.1 0.01 2.57 -1.2 0.7 -0.65 0.36 Sarta Rosa County (113) 147.1 0.1 4.4 0.07 3.01 -0.7 0.4 -0.59 0.32 Sarrasota County (115) 33.3 8. 0.06 2.34 -3.7 1.0 -1.00 0.33								0.5			
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Bartow County (015)		-,									
Bibb County (021)	Georgia (13)	9,434.5	87.0	99.9	0.91	1.04	22.0	20.1	0.28	0.25	
Carroll County (045)	Bartow County (015)	99.2	0.2	3.2	0.24	3.24	-0.2	0.2	-0.31	0.29	
Chatham County (051) 252.2 4.0 7.0 1.58 2.68 0.0 0.8 -0.02 0.37 Cherokee County (057) 212.9 0.6 5.8 0.28 2.71 -1.1 0.5 -0.75 0.35 Clarke County (063) 25.5 2.7 3.6 2.46 3.17 0.3 0.4 0.37 0.41 Clayton County (063) 255.4 5.6 6.9 2.14 2.60 3.6 0.8 1.54 0.33 Cobb County (067) 679.0 7.6 14.4 1.10 2.08 3.7 1.8 0.62 0.29 Columbia County (073) 123.4 -0.1 3.8 -0.11 3.07 -0.2 0.3 -0.19 0.38 Coweta County (077) 126.7 0.6 3.9 0.50 3.03 -0.2 0.2 -0.25 0.28 DeKalb County (089) 678.8 15.1 15.0 2.18 2.11 12.9 2.2 1.94 0.32 <td< td=""><td>Bibb County (021)</td><td>149.5</td><td>2.5</td><td>4.6</td><td></td><td>2.99</td><td>0.5</td><td>0.6</td><td>0.34</td><td>0.42</td></td<>	Bibb County (021)	149.5	2.5	4.6		2.99	0.5	0.6	0.34	0.42	
Cherokee County (057) 212.9 0.6 5.8 0.28 2.71 -1.1 0.5 -0.75 0.35 Clarke County (059) 107.5 2.7 3.6 2.46 3.17 0.3 0.4 0.37 0.41 Clayton County (063) 255.4 5.6 6.9 2.14 2.60 3.6 0.8 1.54 0.33 Cobb County (067) 679.0 7.6 14.4 1.10 2.08 3.7 1.8 0.62 0.29 Columbia County (073) 123.4 -0.1 3.8 -0.11 3.07 -0.2 0.3 -0.19 0.38 Coweta County (077) 126.7 0.6 3.9 0.50 3.03 -0.2 0.2 -0.25 0.28 DeKalb County (089) 678.8 15.1 15.0 2.18 2.11 12.9 2.2 1.94 0.32 Douglas County (097) 131.0 1.2 4.0 0.92 3.00 -0.1 0.3 -0.11 0.31 <	• • •										
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		141.7	0.3	4.2		2.97	-0.1	0.5		0.60	
Whitfield County (313) 101.6 1.0 3.4 0.93 3.24 -0.1 0.3 -0.08 0.39		190.0		5.4		2.77	0.2			0.43	
	Whitfield County (313)	101.6	1.0	3.4	0.93	3.24	-0.1	0.3	-0.08	0.39	

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 134 of 160

			2010				20	000	
	Census Count	Net Undercount	Root Mean Squared Error	Percent Net Undercount	Root Mean Squared Error	Net Undercount	Standard Error	Percent Net Undercount	Standard Error
State and County (FIPS Code)	(×1000)	(×1000) 6.3	(×1000) 53.3	(%) 0.19	(%)	(×1000)	(×1000) 7.3	(%)	(%)
Balance of Georgia	3,305.2	0.3	33.3	0.19	1.01	-8.8	7.3	-0.30	0.23
Hawaii (15)	1,317.4	-5.8	27.2	-0.44	2.08	2.7	9.3	0.23	0.79
Hawaii County (001)	181.4	-2.7	6.0	-1.49	3.43	0.6	1.5	0.43	1.01
Honolulu County (003)	917.9	-0.4	20.4	-0.04	2.23	1.5	6.4	0.18	0.76
Maui County (009)	152.1	-1.8	5.1	-1.18	3.42	0.2	1.1	0.17	0.85
Balance of Hawaii	66.0	-1.0	3.8	-1.55	5.99	0.3	0.2	0.57	0.37
Idaho (16)	1,538.6	-0.5	26.1	-0.03	1.70	-5.3	4.7	-0.42	0.38
Ada County (001)	382.7	-0.7	9.1	-0.19	2.40	-2.0	1.1	-0.67	0.39
Bonneville County (019)	103.1	0.7	3.3	0.68	3.18	-0.6	0.3	-0.73	0.40
Canyon County (027)	185.6	-0.4	5.2	-0.22	2.82	-0.2	0.6	-0.16	0.50
Kootenai County (055)	137.0	0.3	4.1	0.21	3.01	-1.0	0.4	-0.94	0.39
Balance of Idaho	730.3	-0.3	19.3	-0.05	2.65	-1.5	1.9	-0.23	0.30
Illinois (17)	12,528.9	-59.8	126.1	-0.48	1.02	-174.1	27.5	-1.46	0.23
Champaign County (019)	185.0	4.1	5.8	2.15	2.99	-0.9	0.6	-0.56	0.35
Cook County (031)	5,104.4	-33.1	77.0	-0.65	1.53	-61.3	15.6	-1.17	0.30
DeKalb County (037)	98.5	-0.6	3.2	-0.64	3.29	-1.2	0.2	-1.55	0.30
DuPage County (043)	904.8	-7.9	18.0	-0.88	2.03	-13.8	2.6	-1.57	0.30
Kane County (089)	508.5	-4.4	11.7	-0.87	2.33	-6.8	1.1	-1.75	0.29
Kankakee County (091)	108.3	-1.0	3.4	-0.97	3.23	-1.8	0.3	-1.80	0.28
Kendall County (093)	114.5	-1.0	3.6	-0.87	3.18	-0.9	0.2	-1.77	0.33
Lake County (097)	682.8	-6.0	14.5	-0.89	2.17	-9.4	1.8	-1.53	0.29
LaSalle County (099)	111.0	-1.1	3.5	-1.04	3.22	-2.0	0.3	-1.87	0.32
McHenry County (111)	307.1 158.9	-2.7	7.7	-0.89	2.56	-4.5	0.8	-1.78	0.33
McLean County (113)		1.8	4.9	1.14	3.02	-1.5	0.4	-1.07	0.28
Macon County (115) Madison County (119)	106.7 265.5	1.2 -2.8	3.5 6.9	1.14 -1.08	3.24 2.64	-1.6 -6.1	0.3 0.6	-1.51 -2.46	0.31 0.25
Peoria County (143)	181.5	2.5	5.4	1.35	2.92	-0.1	0.6	-1.12	0.23
Rock Island County (161)	143.2	1.4	4.5	0.95	3.06	-2.0	0.3	-1.12	0.30
St. Clair County (163)	265.6	-1.8	6.9	-0.68	2.62	-3.1	0.4	-1.45	0.31
Sangamon County (167)	193.5	2.1	5.6	1.08	2.86	-2.7	0.5	-1.50	0.30
Tazewell County (179)	132.6	0.7	4.1	0.50	3.06	-1.8	0.3	-1.50	0.30
Will County (197)	669.0	-4.8	14.2	-0.73	2.15	-8.5	1.4	-1.75	0.30
Winnebago County (201)	290.6	3.4	7.9	1.16	2.65	-3.2	0.8	-1.17	0.31
Balance of Illinois	1,996.9	-9.5	37.2	-0.48	1.88	-38.9	5.1	-2.00	0.27
Indiana (18)	6,296.9	-42.0	71.1	-0.67	1.14	-99.4	13.7	-1.71	0.24
Allen County (003)	349.2	-3.3	8.5	-0.97	2.47	-5.3	0.7	-1.64	0.24
Clark County (019)	108.7	-1.2	3.4	-1.13	3.23	-2.2	0.2	-2.42	0.26
Delaware County (035)	108.8	1.2	3.6	1.09	3.27	-1.6	0.4	-1.49	0.38
Elkhart County (039)	193.8	-2.3	5.4	-1.19	2.84	-2.1	0.6	-1.18	0.32
Hamilton County (057)	272.9	-2.2	7.0	-0.81	2.60	-3.5	0.4	-1.99	0.25
Hendricks County (063)	142.1	-1.4	4.2	-1.00	3.03	-2.4	0.5	-2.40	0.47
Johnson County (081)	137.3	-1.7	4.1	-1.25	3.07	-2.5	0.3	-2.33	0.31
Lake County (089)	489.7	-4.0	11.2	-0.82	2.33	-6.1	1.3	-1.29	0.27
LaPorte County (091)	104.8	-1.2	3.3	-1.19	3.27	-2.0	0.3	-1.99	0.32
Madison County (095)	125.4	-1.5	3.8	-1.22	3.13	-3.2	0.4	-2.55	0.31
Marion County (097)	886.7	-6.3	17.7	-0.71	2.02	-10.8	2.2	-1.30	0.27
Monroe County (105)	123.0	2.2	4.2	1.78	3.26	-1.0	0.4	-0.93	0.41
Porter County (127)	160.9	-1.7	4.7	-1.04	2.96	-3.0	0.4	-2.12	0.31
St. Joseph County (141)	255.7	-2.3	6.6	-0.92	2.65	-3.1	0.8	-1.25	0.31
Tippecanoe County (157)	158.3	2.7	5.0	1.69	3.05	-0.7	0.4	-0.54	0.33
Vanderburgh County (163)	172.2	1.8	5.2	1.03	2.95	-2.0	0.5	-1.24	0.31
Vigo County (167)	98.3	0.9	3.3	0.89	3.35	-1.3	0.4	-1.37	0.47
Balance of Indiana	2,409.0	-21.8	41.9	-0.91	1.77	-46.5	6.0	-2.02	0.26

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 135 of 160

			2010				20	000	
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)
Iowa (19)	2,948.2	-8.2	41.4	-0.28	1.41	-41.6	7.1	-1.50	0.26
Black Hawk County (013)	125.1	1.4	4.0	1.10	3.14	-0.7	0.4	-0.57	0.32
Johnson County (103)	123.0	2.0	4.0	1.61	3.14	-0.5	0.3	-0.49	0.32
Linn County (113)	206.1	1.6	5.8	0.79	2.79	-2.1	0.5	-1.16	0.30
Polk County (153)	421.3	-4.2	9.8	-1.00	2.38	-6.1	1.2	-1.69	0.34
Scott County (163)	161.9	1.3	4.9	0.82	2.96	-1.1	0.4	-0.71	0.29
Woodbury County (193)	99.5	0.7	3.3	0.71	3.31	-1.7	0.3	-1.74	0.29
Balance of Iowa	1,811.3	-11.1	34.6	-0.62	1.94	-29.4	4.7	-1.67	0.27
Kansas (20)	2,774.0	-18.5	39.3	-0.67	1.44	-33.9	5.6	-1.32	0.22
Douglas County (045)	102.0	1.6	3.5	1.55	3.30	-0.2	0.3	-0.20	0.32
Johnson County (091)	539.0	-4.8	11.9	-0.90	2.24	-6.4	1.1	-1.46	0.24
Sedgwick County (173)	491.1	-5.5	11.1	-1.13	2.31	-6.3	1.1	-1.42	0.25
Shawnee County (177)	173.5	1.8	5.2	1.03	2.94	-1.5	0.5	-0.91	0.32
Wyandotte County (209)	156.2	-1.4	4.6	-0.88	2.99	-1.8	0.4	-1.14	0.27
Balance of Kansas	1,312.2	-10.3	27.9	-0.79	2.16	-17.8	3.5	-1.39	0.28
Kentucky (21)	4,213.5	-5.5	53.6	-0.13	1.28	-19.2	10.6	-0.49	0.27
Boone County (015)	118.0	-0.3	3.7	-0.24	3.11	-0.2	0.3	-0.18	0.31
Fayette County (067)	283.0	1.1	7.3	0.39	2.54	0.0	0.9	-0.02	0.35
Hardin County (093)	102.3	0.0	3.3	-0.04	3.21	0.2	0.3	0.18	0.36
Jefferson County (111)	726.9	1.6	15.1	0.22	2.07	-1.3	2.0	-0.19	0.29
Kenton County (117)	157.4	-0.3	4.6	-0.19	2.92	-0.5	0.5	-0.34	0.33
Warren County (227)	107.6	0.9	3.5	0.81	3.19	0.0	0.3	-0.02	0.33
Balance of Kentucky	2,718.3	-8.5	46.2	-0.31	1.71	-17.4	6.6	-0.68	0.26
Louisiana (22)	4,405.9	-16.7	57.2	-0.38	1.31	-3.8	11.5	-0.09	0.27
Ascension Parish (005)	106.4	-0.6	3.4	-0.58	3.21	-0.7	0.3	-0.93	0.37
Bossier Parish (015)	115.0	0.6	3.7	0.54	3.15	0.3	0.3	0.27	0.30
Caddo Parish (017)	248.7	2.7	6.8	1.06	2.69	0.2	1.0	0.09	0.39
Calcasieu Parish (019)	189.0	-0.4	5.4	-0.21	2.87	-1.4	0.6	-0.80	0.34
East Baton Rouge Parish (033)	429.1	3.5	10.2	0.80	2.34	0.7	1.2	0.18	0.31
Jefferson Parish (051)	429.2	1.5	10.1	0.34	2.33	1.6	1.2	0.34	0.27
Lafayette Parish (055)	216.4	-0.3	5.9	-0.13	2.73	-0.6	0.6	-0.35	0.34
Livingston Parish (063)	126.8	-2.3	3.9	-1.85	3.19	-1.4	0.4	-1.61	0.45
Orleans Parish (071)	330.7	-6.8	10.4	-2.11	3.28	7.9	1.8	1.67	0.37
Ouachita Parish (073)	148.2	1.7	4.5	1.12	3.00	0.1	0.6	0.06	0.40
Rapides Parish (079)	127.1	0.2	4.0	0.13	3.12	-0.3	0.4	-0.23	0.34
St. Tammany Parish (103)	232.5	-2.4	6.2	-1.03	2.71	-0.9	0.6	-0.47	0.31
Tangipahoa Parish (105)	117.5	0.0	3.8	0.01	3.23	-0.8	0.5	-0.80	0.54
Terrebonne Parish (109)	110.4	0.3	3.6	0.29	3.22	-0.2	0.3	-0.16	0.33
Balance of Louisiana	1,479.0	-14.3	30.8	-0.98	2.12	-8.3	4.0	-0.56	0.27
Maine (23)	1,292.8	8.5	26.0	0.65	1.99	-15.1	9.0	-1.23	0.75
Androscoggin County (001)	104.9	-0.4	3.4	-0.37	3.29	-0.9	0.5	-0.91	0.56
Cumberland County (005)	272.5	0.1	7.5	0.02	2.75	-3.2	1.8	-1.25	0.73
Kennebec County (011)	118.5	1.9	4.0	1.54	3.29	-0.8	1.1	-0.68	0.97
Penobscot County (019)	146.6	4.8	6.7	3.17	4.26	-1.4	0.9	-1.03	0.68
York County (031)	194.0	-0.2	5.9	-0.10	3.03	-1.3	1.4	-0.73	0.78
Balance of Maine	456.2	2.3	14.3	0.51	3.11	-7.5	1.3	-1.70	0.31
Maryland (24)	5,635.2	53.3	68.6	0.94	1.19	13.0	16.3	0.25	0.31
Anne Arundel County (003)	523.5	2.4	11.7	0.45	2.22	-1.7	2.0	-0.36	0.43
Baltimore County (005)	784.2	5.3	16.1	0.67	2.03	-2.4	2.8	-0.33	0.38
Carroll County (013)	163.8	0.0	4.7	-0.01	2.88	-1.0	0.7	-0.66	0.48
Cecil County (015)	99.6	-0.2	3.2	-0.24	3.26	-0.7	0.5	-0.82	0.65
Charles County (017)	145.1	1.2	4.3	0.80	2.92	0.8	0.4	0.67	0.31
Frederick County (021)	229.2	0.6	6.1	0.26	2.66	-0.7	0.8	-0.38	0.45

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 136 of 160

			2010			2000				
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard	
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error	
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)	
Harford County (025)	242.1	0.7	6.4	0.28	2.63	-0.6	1.0	-0.29	0.45	
Howard County (027)	284.8	1.7	7.3	0.59	2.52	0.7	0.9	0.28	0.38	
Montgomery County (031)	962.9	8.3	18.9	0.85	1.93	1.3	3.0	0.15	0.34	
Prince George's County (033)	844.1	19.9	17.5	2.30	1.97	12.6	2.8	1.58	0.34	
St. Mary's County (037)	102.2	0.3	3.3	0.28	3.19	0.6	0.4	0.70	0.44	
Washington County (043)	139.0	0.2	4.2	0.16	3.04	-0.7	0.4	-0.58	0.37	
Baltimore city (510)	595.8	13.0	13.8	2.14	2.22	4.5	2.8	0.72	0.44	
Balance of Maryland	518.9	0.0	14.9	0.00	2.86	0.3	1.4	0.07	0.30	
Massachusetts (25)	6,308.7	-32.4	72.0	-0.52	1.15	-63.1	16.1	-1.04	0.27	
Barnstable County (001)	211.9	1.4	6.7	0.67	3.11	-5.3	1.1	-2.49	0.52	
Berkshire County (003)	125.1	2.1	4.5	1.66	3.50	-1.5	0.7	-1.14	0.54	
Bristol County (005)	532.4	-6.0	11.7	-1.14	2.26	-6.6	1.5	-1.28	0.29	
Essex County (009)	726.7	-7.3	15.0	-1.02	2.10	-9.1	2.1	-1.31	0.31	
Hampden County (013)	448.7	-2.9	10.4	-0.66	2.36	-4.5	1.7	-1.04	0.38	
Hampshire County (015)	137.2	0.1	4.2	0.10	3.02	-2.3	0.6	-1.75	0.43	
Middlesex County (017)	1,447.7	-6.2	25.6	-0.43	1.78	-10.9	4.3	-0.78	0.31	
Norfolk County (021)	653.2	-2.3	13.8	-0.35	2.12	-6.5	2.0	-1.04	0.32	
Plymouth County (023)	483.1	-3.1	10.9	-0.64	2.29	-7.7	1.5	-1.70	0.34	
Suffolk County (025)	674.8	-9.0	14.7	-1.36	2.24	0.9	2.6	0.13	0.40	
Worcester County (027)	771.5	-2.3	15.7	-0.30	2.05	-7.6	2.1	-1.06	0.30	
Balance of Massachusetts	96.4	3.1	5.7	3.13	5.54	-2.0	0.3	-2.19	0.37	
Michigan (26)	9,654.6	-63.0	97.7	-0.66	1.02	-93.4	20.8	-0.97	0.22	
Allegan County (005)	110.5	-1.4	3.5	-1.25	3.22	-2.2	0.2	-2.19	0.24	
Bay County (017)	106.3	0.7	3.5	0.63	3.21	-1.3	0.3	-1.22	0.31	
Berrien County (021)	153.3	1.2	4.7	0.80	3.05	-2.0	0.5	-1.28	0.31	
Calhoun County (025)	131.9	1.2	4.2	0.92	3.13	-1.4	0.5	-1.09	0.40	
Eaton County (045)	106.2	-1.0	3.4	-0.93	3.23	-1.1	0.3	-1.11	0.29	
Genesee County (049)	419.8	-2.8	9.9	-0.67	2.39	-4.9	1.2	-1.15	0.28	
Ingham County (065)	262.4	-1.8	6.8	-0.69	2.64	-1.0	0.8	-0.36	0.30	
Jackson County (075)	150.6	1.1	4.6	0.75	3.01	-1.8	0.4	-1.26	0.29	
Kalamazoo County (077)	241.9	3.5	6.8	1.41	2.74	-1.3	0.7	-0.58	0.30	
Kent County (081)	591.3	-4.8	12.8	-0.82	2.20	-7.3	1.3	-1.31	0.24	
Livingston County (093)	179.8	-1.6	5.1	-0.89	2.87	-2.4	0.4	-1.60	0.30	
Macomb County (099)	833.5	-7.2	16.8	-0.88	2.05	-9.7	2.5	-1.26	0.32	
Monroe County (115)	150.6	-1.6	4.4	-1.09	3.00	-2.1	0.4	-1.50	0.31	
Muskegon County (121)	165.8	-1.6	4.8	-0.98	2.92	-2.4	0.4	-1.47	0.23	
Oakland County (125)	1,189.9	-8.2	22.2	-0.70	1.90	-10.0	3.5	-0.85	0.30	
Ottawa County (139)	255.5	-2.4	6.7	-0.93	2.65	-3.7	0.5	-1.65	0.25	
Saginaw County (145)	193.1	2.2	5.6	1.14	2.84	-1.0	0.6	-0.51	0.29	
St. Clair County (147)	161.0	-1.7	4.7	-1.05	2.96	-2.4	0.5	-1.50	0.32	
Washtenaw County (161)	327.0	-1.2	8.2	-0.38	2.51	-1.1	0.9	-0.36	0.30	
Wayne County (163)	1,796.7	-10.3	31.8	-0.58	1.79	5.1	5.9	0.25	0.29	
Balance of Michigan	2,127.5	-25.3	38.9	-1.20	1.87	-39.2	5.4	-1.90	0.27	
Minnesota (27)	5,168.5	-28.8	61.5	-0.56	1.20	-82.1	9.7	-1.75	0.21	
Anoka County (003)	327.8	-2.7	8.1	-0.83	2.50	-6.5	0.7	-2.24	0.26	
Dakota County (037)	395.7	-3.2	9.3	-0.81	2.40	-5.8	0.9	-1.66	0.25	
Hennepin County (053)	1,127.3	-5.6	21.2	-0.50	1.90	-15.4	2.5	-1.44	0.24	
Olmsted County (109)	141.5	1.2	4.3	0.81	3.00	-1.3	0.3	-1.05	0.28	
Ramsey County (123)	490.3	-4.1	11.1	-0.84	2.31	-7.6	1.2	-1.57	0.25	
St. Louis County (137)	190.8	1.1	5.6	0.58	2.88	-2.8	0.5	-1.50	0.29	
Scott County (139)	128.6	-1.0	3.9	-0.80	3.08	-1.7	0.2	-1.96	0.26	
Stearns County (145)	142.4	-0.9	4.2	-0.65	3.01	-1.2	0.4	-1.00	0.33	
Washington County (163)	234.6	-1.8	6.2	-0.77	2.69	-3.9	0.5	-2.02	0.25	
Wright County (171)	123.6	-0.8	3.8	-0.69	3.12	-2.1	0.2	-2.45	0.28	
Balance of Minnesota	1,865.9	-10.9	35.4	-0.59	1.92	-33.7	4.6	-1.98	0.27	
_ simile of minimesom	1 1,000.7	10.7	33.4	0.57	1.72	33.1	7.0	1.70	0.27	

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 137 of 160

			2010				20	000	
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)
Mississippi (28)	2,875.3	6.9	41.8	0.24	1.45	-11.7	9.4	-0.43	0.34
DeSoto County (033)	160.6	0.0	4.6	0.01	2.89	-1.7	0.4	-1.58	0.42
Harrison County (047)	181.7	-0.1	5.3	-0.06	2.90	-0.6	0.7	-0.32	0.37
Hinds County (049)	237.4	2.6	6.4	1.07	2.63	1.1	1.1	0.44	0.47
Jackson County (059)	138.4	-0.2	4.2	-0.16	3.06	0.1	0.6	0.10	0.45
Rankin County (121)	136.0	-0.3	4.1	-0.20	3.01	-0.7	0.4	-0.64	0.33
Balance of Mississippi	2,021.2	5.0	38.8	0.24	1.91	-9.9	5.2	-0.51	0.26
Missouri (29)	5,814.8	-38.0	68.2	-0.66	1.19	-74.3	11.4	-1.39	0.22
Boone County (019)	153.6	2.4	4.8	1.54	3.06	-0.5	0.4	-0.41	0.30
Clay County (047)	219.3	-2.3	5.9	-1.06	2.75	-2.9	0.4	-1.60	0.24
Franklin County (071)	100.6	-1.3	3.2	-1.27	3.29	-2.1	0.2	-2.28	0.28
Greene County (077)	263.9	2.3	7.3	0.88	2.73	-1.8	0.6	-0.80	0.28
Jackson County (095)	662.9	-5.0	14.0	-0.76	2.14	-6.4	1.5	-1.00	0.24
Jasper County (097)	114.9	0.6	3.8	0.51	3.25	-1.5	0.3	-1.52	0.29
Jefferson County (099)	216.8	-2.8	5.9	-1.30	2.77	-4.9	0.5	-2.54	0.25
St. Charles County (183)	355.1	-3.5	8.6	-1.01	2.46	-4.9	0.7	-1.78	0.25
St. Louis County (189)	979.5	-6.3	18.9	-0.65	1.96	-9.6	2.2	-0.97	0.23
St. Louis city (510)	307.3	-1.0	7.9	-0.34	2.59	0.2	1.2	0.05	0.35
Balance of Missouri	2,440.8	-21.1	43.6	-0.87	1.82	-39.9	5.8	-1.81	0.27
Montana (30)	960.6	-6.2	19.0	-0.65	2.01	4.4	7.6	0.50	0.85
Missoula County (063)	105.7	0.2	3.4	0.16	3.21	1.2	0.7	1.27	0.73
Yellowstone County (111)	144.3	0.5	4.3	0.33	2.97	0.3	1.0	0.27	0.82
Balance of Montana	710.6	-6.9	19.1	-0.98	2.74	2.9	1.9	0.43	0.29
Nebraska (31)	1,775.2	-9.6	28.3	-0.54	1.61	-13.7	3.6	-0.83	0.22
Douglas County (055)	504.9	-4.4	11.3	-0.87	2.28	-3.4	1.1	-0.77	0.24
Lancaster County (109)	271.6	3.2	7.5	1.16	2.68	-0.4	0.7	-0.15	0.29
Sarpy County (153)	157.6	-1.6	4.6	-1.05	2.96	-0.5	0.3	-0.44	0.28
Balance of Nebraska	841.1	-6.7	20.7	-0.81	2.49	-9.3	2.4	-1.11	0.29
Nevada (32)	2,664.4	-1.1	38.8	-0.04	1.46	10.0	8.0	0.50	0.40
Clark County (003)	1,929.3	-5.1	33.0	-0.27	1.72	9.3	6.0	0.68	0.44
Washoe County (031)	416.1	5.3	10.0	1.26	2.34	2.3	1.8	0.67	0.52
Balance of Nevada	319.0	-1.2	10.7	-0.38	3.37	-1.6	0.9	-0.60	0.32
New Hampshire (33)	1,276.4	7.7	26.8	0.60	2.07	-14.0	5.2	-1.18	0.45
Hillsborough County (011)	393.0	-1.0	9.5	-0.25	2.42	-3.4	1.3	-0.91	0.37
Merrimack County (013)	140.1	0.8	4.6	0.58	3.22	-1.3	0.8	-0.98	0.62
Rockingham County (015)	292.7	-1.7	7.4	-0.58	2.55	-3.8	0.9	-1.41	0.34
Strafford County (017)	114.7	-0.1	3.6	-0.13	3.18	-0.6	0.5	-0.55	0.46
Balance of New Hampshire	335.8	9.7	15.1	2.82	4.25	-5.0	1.0	-1.60	0.32
New Jersey (34)	8,605.0	-31.0	91.2	-0.36	1.07	-43.4	22.2	-0.53	0.27
Atlantic County (001)	268.5	-0.6	7.6	-0.23	2.86	-2.8	0.7	-1.15	0.28
Bergen County (003)	894.7	-5.0	17.6	-0.56	1.98	-6.2	2.5	-0.71	0.29
Burlington County (005)	435.5	1.1	10.1	0.26	2.30	-2.1	1.2	-0.51	0.30
Camden County (007)	506.2	-0.2	11.3	-0.05	2.24	-2.1	1.4	-0.43	0.28
Cumberland County (011)	144.8	-0.1	4.3	-0.04	2.97	-1.0	0.4	-0.75	0.29
Essex County (013)	760.2	-4.7	16.3	-0.62	2.17	-0.3	3.1	-0.04	0.40
Gloucester County (015)	284.1	-0.4	7.2	-0.14	2.55	-2.3	0.8	-0.93	0.31
Hudson County (017)	624.9	-7.8	13.7	-1.27	2.25	-3.2	2.2	-0.53	0.37
Hunterdon County (019)	123.8	0.0	3.8	0.02	3.06	-1.4	0.4	-1.19	0.34
Mercer County (021)	347.7	0.3	8.5	0.07	2.43	-2.4	0.9	-0.73	0.28
Middlesex County (023)	786.0	-1.0	16.0	-0.12	2.03	-2.8	2.1	-0.38	0.29
Monmouth County (025)	622.7	-2.6	13.2	-0.41	2.14	-5.3	1.8	-0.89	0.30

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 138 of 160

			2010			2000					
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard		
ļ	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error		
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)		
Morris County (027)	483.4	0.4	10.9	0.08	2.25	-3.0	1.4	-0.64	0.31		
Ocean County (029)	569.4	-3.8	12.4	-0.67	2.20	-4.5	1.6	-0.90	0.32		
Passaic County (031)	490.2	-3.3	11.2	-0.67	2.31	1.1	1.4	0.24	0.30		
Somerset County (035)	319.5	0.9	7.9	0.28	2.46	-1.0	0.8	-0.34	0.29		
Sussex County (037)	147.5	-0.7	4.3	-0.45	2.97	-1.2	0.5	-0.87	0.38		
Union County (039)	529.7	-0.5	11.8	-0.10	2.23	-0.8	1.4	-0.16	0.27		
Warren County (041)	106.7	-0.7	3.4	-0.66	3.21	-0.2	0.4	-0.17	0.44		
Balance of New Jersey	159.5	-2.4	6.7	-1.53	4.36	-2.2	0.5	-1.36	0.34		
New Mexico (35)	2,016.6	-3.2	31.8	-0.16	1.58	0.3	8.4	0.02	0.47		
Bernalillo County (001)	650.6	-0.5	13.9	-0.08	2.14	0.3	1.9	0.06	0.34		
Dona Ana County (013)	204.7	2.1	5.8	1.01	2.78	1.6	1.5	0.96	0.88		
Sandoval County (043)	130.8	-0.5	4.0	-0.37	3.07	-0.9	0.3	-0.97	0.39		
San Juan County (045)	128.3	0.2	4.1	0.16	3.20	0.4	0.7	0.39	0.65		
Santa Fe County (049)	141.6	0.5	4.3	0.33	3.01	-1.0	0.9	-0.76	0.71		
Balance of New Mexico	760.6	-5.0	19.7	-0.67	2.63	-0.3	2.1	-0.04	0.29		
New York (36)	18,792.4	-148.2	170.7	-0.79	0.92	-47.6	49.8	-0.26	0.27		
Albany County (001)	287.2	-1.9	7.4	-0.66	2.60	-1.7	1.0	-0.61	0.27		
Bronx County (005)	1,338.4	-5.2	26.2	-0.39	1.97	26.2	5.5	2.00	0.41		
Broome County (007)	190.5	0.7	5.7	0.36	2.95	-0.8	0.9	-0.40	0.46		
Chautauqua County (013)	128.4	2.3	4.4	1.76	3.30	-0.2	0.6	-0.15	0.46		
Dutchess County (027)	277.5	4.7	9.9	1.68	3.44	-1.2	1.4	-0.13	0.54		
Erie County (029)	890.7	-7.5	17.9	-0.85	2.04	-1.2 -4.1	3.9	-0.45	0.34		
Jefferson County (045)	110.1	2.4	4.0	2.17	3.47	0.6	0.5	0.53	0.43		
Kings County (047)	2,469.1	-62.8	44.7	-2.61	1.91	9.0	11.2	0.33	0.31		
Monroe County (047)	718.1	-02.8	15.1	-0.33	2.11	-2.3	3.0	-0.32	0.40		
3 \ /		-2.4		-0.33							
Nassau County (059)	1,317.9	-10.7 -9.3	23.7	-0.82 -0.62	1.83	-13.8	3.8	-1.06	0.30		
New York County (061)	1,518.5		27.4		1.83	4.6	5.8	0.31	0.39 0.49		
Niagara County (063)	212.2	-1.2	5.8	-0.58	2.76	-1.9	1.0	-0.88			
Oneida County (065)	221.5	0.0	6.4	-0.01	2.87	-1.2	1.1	-0.57	0.50		
Onondaga County (067)	450.0	-1.3	10.4	-0.29	2.33	-3.5	1.8	-0.79	0.42		
Ontario County (069)	104.6	-0.4	3.3	-0.37	3.21	-1.9	0.5	-1.96	0.49		
Orange County (071)	360.6	-4.6	8.7	-1.30	2.47	-0.5	2.2	-0.15	0.66		
Oswego County (075)	117.2	-0.7	3.7	-0.59	3.16	-0.5	0.8	-0.39	0.65		
Queens County (081)	2,202.7	-43.9	39.5	-2.04	1.87	1.3	8.3	0.06	0.38		
Rensselaer County (083)	153.8	-1.4	4.5	-0.93	2.99	-1.2	0.8	-0.84	0.52		
Richmond County (085)	460.9	-9.9	10.7	-2.18	2.41	-5.3	1.4	-1.23	0.34		
Rockland County (087)	304.5	-2.6	7.6	-0.85	2.54	-2.4	0.8	-0.87	0.29		
St. Lawrence County (089)	101.2	2.2	3.6	2.10	3.41	-0.5	0.6	-0.46	0.58		
Saratoga County (091)	215.7	-0.6	5.8	-0.28	2.72	-3.3	0.8	-1.73	0.45		
Schenectady County (093)	150.3	-1.5	4.4	-1.04	3.02	-1.8	0.6	-1.31	0.41		
Suffolk County (103)	1,463.9	-2.4	29.3	-0.16	2.01	-21.8	4.1	-1.59	0.30		
Tompkins County (109)	88.3	0.7	3.1	0.83	3.48	-0.2	0.6	-0.21	0.67		
Ulster County (111)	170.7	2.1	6.6	1.23	3.76	-0.7	1.4	-0.42	0.84		
Westchester County (119)	920.4	-5.6	18.0	-0.61	1.98	-1.2	2.5	-0.13	0.28		
Balance of New York	1,847.8	12.6	37.9	0.68	2.02	-17.3	4.8	-0.95	0.27		
North Carolina (37)	9,278.2	48.6	96.2	0.52	1.03	-12.1	20.9	-0.15	0.27		
Alamance County (001)	146.9	0.0	4.3	0.02	2.95	-0.4	0.4	-0.32	0.28		
Brunswick County (019)	106.6	0.4	3.5	0.33	3.22	-0.1	0.3	-0.19	0.46		
Buncombe County (021)	230.6	0.7	6.3	0.29	2.73	-1.7	0.7	-0.87	0.33		
Cabarrus County (025)	176.5	0.2	5.0	0.10	2.82	-1.2	0.4	-0.94	0.32		
Catawba County (035)	152.0	0.8	4.6	0.50	2.97	-1.4	0.4	-1.02	0.32		
Craven County (049)	00.6	0.7	3.2	0.69	3.25	0.0	0.3	-0.05	0.33		
Clavell County (047)	98.6	0.7	3.2								
Cumberland County (051)	309.3	4.6	8.2	1.46	2.58	2.8	1.0	0.97	0.36		
• ` '					2.58 2.91	2.8 -1.6	1.0 0.5	0.97 -1.09	0.36 0.33		

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 139 of 160

			2010			2000				
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard	
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error	
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)	
Forsyth County (067)	340.8	2.0	8.3	0.57	2.42	0.4	0.8	0.14	0.26	
Gaston County (071)	202.8	-0.1	5.6	-0.06	2.75	-1.7	0.6	-0.89	0.32	
Guilford County (081)	472.9	3.3	10.8	0.69	2.25	2.6	1.2	0.64	0.29	
Harnett County (085)	111.3	0.0	3.5	0.00	3.15	-0.2	0.4	-0.22	0.48	
Henderson County (089)	105.4	0.1	3.4	0.07	3.23	-0.6	0.4	-0.66	0.48	
Iredell County (097)	158.1	-0.2	4.6	-0.11	2.91	-0.4	0.4	-0.35	0.32	
Johnston County (101)	167.1	0.1	4.8	0.07	2.87	-1.4	0.4	-1.21	0.35	
Mecklenburg County (119)	903.6	8.6	18.0	0.95	1.95	2.7	1.9	0.40	0.28	
New Hanover County (129)	196.0	2.2	5.6	1.10	2.81	0.9	0.6	0.58	0.39	
Onslow County (133)	160.0	1.7	4.8	1.06	2.94	2.2	0.5	1.66	0.37	
Orange County (135)	124.2	0.4	3.8	0.35	3.05	0.1	0.3	0.08	0.28	
Pitt County (147)	161.6	2.4	4.9	1.45	2.93	0.3	0.5	0.24	0.42	
Randolph County (151)	140.5	-0.5	4.2	-0.34	3.00	-0.7	0.4	-0.55	0.33	
Robeson County (155)	130.1	-0.4	4.7	-0.31	3.61	-1.7	0.8	-1.40	0.73	
Rowan County (159)	134.1	-0.4	4.0	-0.30	3.03	-1.4	0.4	-1.15	0.31	
Union County (179)	199.2	0.1	5.5	0.05	2.75	-1.1	0.4	-0.89	0.35	
Wake County (183)	880.0	5.4	17.5	0.61	1.96	4.2	1.6	0.68	0.27	
Wayne County (191)	119.4	1.3	3.8	1.09	3.12	0.4	0.4	0.37	0.39	
Balance of North Carolina	2,931.9	12.1	49.2	0.41	1.67	-16.1	6.8	-0.61	0.26	
North Dakota (38)	647.5	0.6	14.1	0.09	2.17	-9.0	1.6	-1.48	0.26	
Cass County (017)	144.8	1.8	4.5	1.21	3.04	-0.8	0.3	-0.65	0.29	
Balance of North Dakota	502.8	-1.2	14.7	-0.23	2.93	-8.3	1.5	-1.68	0.31	
Ohio (39)	11,230.2	-92.6	110.2	-0.83	1.00	-142.8	22.9	-1.31	0.21	
Allen County (003)	100.4	0.9	3.4	0.94	3.30	-0.9	0.4	-0.88	0.36	
Ashtabula County (007)	98.3	-1.4	3.2	-1.43	3.32	-2.2	0.2	-2.23	0.25	
Butler County (017)	357.2	-3.8	8.6	-1.08	2.47	-4.7	0.8	-1.49	0.25	
Clark County (023)	135.5	-1.7	4.1	-1.27	3.08	-2.7	0.3	-1.99	0.25	
Clermont County (025)	195.6	-2.4	5.4	-1.27	2.83	-3.0	0.5	-1.75	0.27	
Columbiana County (029)	103.9	-1.5	3.3	-1.43	3.28	-2.8	0.4	-2.66	0.35	
Cuyahoga County (035)	1,250.9	-9.6	23.2	-0.78	1.88	-9.3	3.2	-0.69	0.24	
Delaware County (041)	171.8	-1.4	4.9	-0.85	2.89	-1.9	0.3	-1.80	0.25	
Fairfield County (045)	143.3	-1.6	4.2	-1.14	3.03	-2.1	0.3	-1.79	0.25	
Franklin County (049)	1,138.2	-8.9	21.6	-0.79	1.93	-6.9	2.7	-0.67	0.26	
Greene County (057)	152.8	-1.7	4.5	-1.10	2.99	-1.5	0.4	-1.08	0.26	
Hamilton County (061)	782.9	-5.1	16.0	-0.65	2.07	-4.7	2.0	-0.57	0.24	
Lake County (085)	227.3	-2.5	6.1	-1.11	2.73	-4.0	0.5	-1.83	0.25	
Licking County (089)	163.0	-2.0	4.7	-1.24	2.95	-2.7	0.3	-1.91	0.25	
Lorain County (093)	292.0	-3.2	7.4	-1.10	2.58	-4.2	0.6	-1.53	0.23	
Lucas County (095)	431.1	-4.2	10.0	-0.97	2.37	-6.0	1.0	-1.36	0.24	
Mahoning County (099)	230.9	-2.4	6.1	-1.03	2.72	-3.2	0.5	-1.29	0.22	
Medina County (103)	171.1	-1.7	4.9	-1.03	2.90	-2.8	0.4	-1.93	0.25	
Miami County (109)	101.5	-1.3	3.3	-1.30	3.29	-1.7	0.3	-1.81	0.27	
Montgomery County (113)	521.0	-4.9	11.6	-0.94	2.27	-4.8	1.3	-0.90	0.25	
Portage County (133)	153.5	-1.7	4.5	-1.14	2.99	-3.5	0.3	-2.51	0.25	
Richland County (139)	117.2	0.8	3.8	0.66	3.19	-1.5	0.4	-1.22	0.30	
Stark County (151)	366.3	2.8	9.3	0.76	2.51	-2.7	1.1	-0.75	0.30	
Summit County (153)	531.8	-4.9	11.8	-0.93	2.25	-10.0	1.2	-1.90	0.24	
Trumbull County (155)	206.5	-2.4	5.6	-1.20	2.79	-3.7	0.5	-1.72	0.24	
Warren County (165)	206.7	-2.1	5.6	-1.04	2.78	-2.9	0.4	-1.93	0.25	
Wayne County (169)	111.3	-1.0	3.5	-0.92	3.21	-1.1	0.3	-1.07	0.29	
Wood County (173)	119.3	-1.2	3.7	-1.03	3.15	-1.8	0.3	-1.65	0.25	
Balance of Ohio	2,648.9	-22.5	44.9	-0.86	1.73	-43.3	6.6	-1.69	0.26	
Oklahoma (40)	3,639.3	-38.9	49.9	-1.08	1.40	-6.7	9.7	-0.20	0.29	
Canadian County (017)	113.1	-0.7	3.5	-0.62	3.17	-0.4	0.3	-0.42	0.31	
Cleveland County (027)	245.2	-1.2	6.5	-0.49	2.66	-0.1	0.6	-0.03	0.29	

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 140 of 160

			2010			2000				
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard	
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error	
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)	
Comanche County (031) Oklahoma County (109)	113.8 703.6	0.2	3.7	0.17	3.21 2.09	1.1	0.3	1.04	0.32	
Tulsa County (143)	593.6	1.1 -0.7	14.8 13.0	0.16 -0.12	2.09	1.6 -0.4	1.8 1.6	0.24 -0.08	0.28 0.30	
Balance of Oklahoma	1,870.1	-37.6	37.7	-0.12	2.19	-0.4 -8.6	4.7	-0.08 -0.49	0.30	
Datance of Oktanoma	1,870.1	-37.0	37.7	-2.03	2.10	-8.0	4./	-0.49	0.27	
Oregon (41)	3,744.4	0.9	49.6	0.02	1.32	-12.0	10.8	-0.36	0.33	
Clackamas County (005)	373.2	-2.5	8.9	-0.67	2.43	-3.5	1.3	-1.07	0.41	
Deschutes County (017)	156.5	0.1	4.6	0.09	2.94	-0.8	0.5	-0.72	0.41	
Douglas County (019)	106.0	-0.3	3.6	-0.29	3.38	-0.2	0.6	-0.20	0.62	
Jackson County (029)	199.7	0.6	5.6	0.31	2.78	-0.6	0.8	-0.32	0.46	
Lane County (039)	343.2	2.2	8.6	0.64	2.46	-1.4	1.2	-0.45	0.39	
Linn County (043)	115.4	0.6	3.6	0.48	3.12	-0.4	0.5	-0.36	0.45	
Marion County (047)	304.9	3.2	7.8	1.04	2.51	1.1	2.5	0.42	0.89	
Multnomah County (051)	715.8	-2.0	14.9	-0.28	2.10	-4.8	2.3	-0.76	0.36	
Washington County (067)	522.9	-0.5	11.7	-0.09	2.23	-1.7	1.5	-0.38	0.34	
Balance of Oregon	906.8	-0.5	22.7	-0.06	2.50	0.2	2.4	0.03	0.29	
Pennsylvania (42)	12,276.3	17.4	119.8	0.14	0.97	-111.1	33.3	-0.95	0.29	
Adams County (001)	97.4	0.6	3.3	0.60	3.36	-0.8	0.6	-0.91	0.67	
Allegheny County (003)	1,188.3	-4.4	22.3	-0.37	1.89	-15.1	5.1	-1.23	0.42	
Beaver County (007)	167.2	-0.6	4.8	-0.39	2.89	-2.0	0.8	-1.17	0.44	
Berks County (011)	399.4	1.1	9.5	0.28	2.36	-1.1	1.7	-0.32	0.48	
Blair County (013)	123.4	2.2	4.3	1.76	3.35	-1.4	0.6	-1.12	0.51	
Bucks County (017)	617.0	-0.8	13.2	-0.13	2.14	-4.7	1.9	-0.81	0.32	
Butler County (019)	178.4	-0.4	5.1	-0.23	2.84	-3.3	0.8	-1.98	0.49	
Cambria County (021)	135.6	0.8	4.2	0.59	3.09	-1.8	0.9	-1.25	0.67	
Centre County (027)	137.0	2.5	4.5	1.79	3.19	-0.1	0.6	-0.05	0.48	
Chester County (029)	485.6	2.4	11.1	0.49	2.26	-4.4	1.3	-1.05	0.31	
Cumberland County (041)	222.6	-0.4	6.0	-0.17	2.70	-2.3	1.0	-1.15	0.50	
Dauphin County (043)	261.3	-0.1	6.8	-0.04	2.62	-1.8	0.9	-0.72	0.39	
Delaware County (045)	535.9	0.4	11.9	0.08	2.21	-3.9	1.6	-0.74	0.31	
Erie County (049)	267.7	1.8	7.4	0.68	2.72	-1.8	1.6	-0.69	0.59	
Fayette County (051)	132.4	0.6	4.4	0.45	3.27	-2.7	0.9	-1.87	0.65	
Franklin County (055)	146.9	3.0	4.9	1.97	3.21	-1.2	0.8	-0.94	0.61	
Lackawanna County (069)	206.4	-0.5	6.1	-0.24	2.98	-4.0	0.9	-2.00	0.44	
Lancaster County (071)	506.8	-1.0	11.4	-0.20	2.25	-3.7	2.6	-0.81	0.58	
Lebanon County (075)	129.9	0.2	4.1	0.15	3.12	-1.0	0.5	-0.83	0.40	
Lehigh County (077)	340.5	-1.1	8.4	-0.32	2.47	-3.0	1.2	-1.01	0.42	
Luzerne County (079)	309.1	0.4	8.4	0.14	2.72	-4.5	1.3	-1.49	0.43	
Lycoming County (081)	110.7	1.5	3.8	1.37	3.36	-1.5	0.5	-1.31	0.49	
Mercer County (085)	109.9	-0.4	3.5	-0.41	3.18	-1.5	0.7	-1.31	0.64	
Monroe County (089)	166.1	0.9	5.1	0.54	3.06	-2.0	0.9	-1.51	0.69	
Montgomery County (091)	778.9	1.6	15.8	0.21	2.02	-5.1	2.2	-0.71	0.31	
Northampton County (095)	287.1	-1.0	7.3	-0.34	2.56	-3.2	1.1	-1.27	0.44	
Philadelphia County (101)	1,468.6	-9.6	27.5	-0.66	1.90	-5.9	4.8	-0.40	0.33	
Schuylkill County (107)	141.5	2.6	4.6	1.79	3.17	-1.8	0.7	-1.26	0.52	
Washington County (125)	201.9	-0.3	5.6	-0.13	2.77	-4.3	0.9	-2.23	0.46	
Westmoreland County (129)	357.2	-1.0	8.6	-0.28	2.43	-4.0	1.6	-1.13	0.44	
York County (133)	426.5	-0.8	9.9	-0.18	2.34	-2.0	2.0	-0.55	0.54	
Balance of Pennsylvania	1,639.1	17.1	35.5	1.03	2.12	-15.4	4.3	-0.95	0.27	
Rhode Island (44)	1,009.9	-8.1	19.0	-0.81	1.91	-11.8	3.5	-1.18	0.35	
Kent County (003)	164.6	-0.8	4.7	-0.52	2.90	-3.6	0.8	-2.20	0.49	
Providence County (007)	598.9	-5.7	13.0	-0.96	2.22	-5.9	2.1	-1.00	0.37	
Washington County (009)	120.5	-0.7	3.7	-0.61	3.12	-0.7	0.6	-0.62	0.49	
Balance of Rhode Island	125.9	-0.8	5.7	-0.65	4.56	-1.6	0.4	-1.26	0.35	
South Carolina (45)	4,486.2	18.3	56.6	0.41	1.25	-14.6	10.6	-0.38	0.28	

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 141 of 160

-			2010				20	00	
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)
Aiken County (003)	157.7	0.0	4.6	0.02	2.91	-0.9	0.5	-0.67	0.34
Anderson County (007)	184.4	-0.5	5.2	-0.28	2.82	-1.7	0.5	-1.06	0.31
Beaufort County (013)	157.0	1.2	4.7	0.78	2.95	-0.4	0.4	-0.31	0.38
Berkeley County (015)	174.1	0.2	5.0	0.14	2.84	-0.6	0.5	-0.43	0.36
Charleston County (019)	339.9	1.9	8.4	0.57	2.45	0.2	1.0	0.06	0.33
Dorchester County (035)	134.5	0.2	4.1	0.14	3.00	-0.7	0.3	-0.70	0.29
Florence County (041)	133.7	1.2	4.2	0.88	3.06	-0.2	0.4	-0.19	0.36
Greenville County (045)	439.4	0.9	10.2	0.21	2.31	-1.2	1.0	-0.32	0.28
Horry County (051)	266.3	2.3	7.2	0.86	2.66	-1.0	0.7	-0.49	0.36
Lexington County (063)	260.1	0.2	6.8	0.06	2.60	-0.6	0.7	-0.27	0.31
Pickens County (077)	112.2	-0.3	3.5	-0.27	3.17	-0.8	0.3	-0.77	0.31
Richland County (079)	352.5	3.7	8.6	1.03	2.39	3.1	0.9	1.04	0.30
Spartanburg County (083)	276.3	-0.7	7.1	-0.26	2.58	-1.0	0.7	-0.40	0.28
Sumter County (085)	104.7	1.4	3.5	1.30	3.21	0.7	0.4	0.68	0.39
York County (091)	222.2	0.3	6.0	0.16	2.68	-0.8	0.5	-0.47	0.29
Balance of South Carolina	1,171.4	6.2	26.1	0.53	2.21	-8.8	3.1	-0.79	0.28
South Dakota (46)	780.1	0.8	16.0	0.10	2.05	-9.6	1.9	-1.33	0.27
Minnehaha County (099)	163.2	1.6	4.9	0.98	2.95	-1.0	0.4	-0.69	0.28
Pennington County (103)	98.4	0.7	3.4	0.73	3.36	-0.3	0.3	-0.36	0.30
Balance of South Dakota	518.6	-1.5	14.9	-0.30	2.89	-8.3	1.5	-1.69	0.31
Tennessee (47)	6,192.6	7.1	71.5	0.12	1.15	-23.2	13.4	-0.42	0.24
Blount County (009)	121.0	-0.4	3.7	-0.36	3.10	-0.9	0.3	-0.86	0.30
Davidson County (037)	600.8	4.7	13.1	0.77	2.15	0.6	1.7	0.11	0.31
Hamilton County (065)	326.7	0.1	8.1	0.04	2.47	-1.9	1.0	-0.63	0.33
Knox County (093)	419.9	-0.2	9.8	-0.05	2.34	-3.4	1.1	-0.93	0.32
Montgomery County (125)	168.9	1.5	5.0	0.89	2.90	1.2	0.4	0.90	0.33
Rutherford County (149)	257.5	0.2	6.7	0.09	2.61	-0.2	0.6	-0.12	0.32
Shelby County (157)	909.3	9.2	18.6	1.00	2.00	3.8	2.8	0.44	0.32
Sullivan County (163)	154.2	-1.0	4.5	-0.63	2.95	-2.2	0.5	-1.49	0.36
Sumner County (165)	159.4	-0.5	4.6	-0.32	2.91	-1.1	0.4	-0.85	0.31
Washington County (179)	118.3	-0.4	3.7	-0.35	3.12	-1.5	0.4	-1.46	0.36
Williamson County (187)	182.0	-0.4	5.1	-0.23	2.82	-0.1	0.4	-0.08	0.31
Wilson County (189)	112.8	-0.3	3.5	-0.27	3.14	-0.8	0.3	-0.89	0.33
Balance of Tennessee	2,661.8	-5.4	45.5	-0.20	1.72	-16.9	6.3	-0.70	0.26
Texas (48)	24,564.4	239.5	212.1	0.97	0.85	10.2	55.5	0.05	0.27
Bell County (027)	302.2	3.5	8.0	1.14	2.58	2.1	0.9	0.93	0.38
Bexar County (029)	1,672.8	6.6	29.7	0.39	1.76	-5.1	4.0	-0.38	0.30
Brazoria County (039)	302.6	0.4	7.6	0.13	2.51	-1.2	0.9	-0.52	0.38
Brazos County (041)	181.3	4.0	5.4	2.17	2.86	1.1	0.6	0.82	0.39
Cameron County (061)	402.5	5.3	10.4	1.30	2.51	0.2	3.2	0.07	0.96
Collin County (085)	778.4	4.7	15.9	0.60	2.02	2.8	1.6	0.58	0.33
Comal County (091)	107.4	-0.6	3.4	-0.54	3.20	-0.4	0.2	-0.53	0.28
Dallas County (113)	2,337.7	42.5	40.0	1.79	1.65	19.4	7.4	0.88	0.33
Denton County (121)	652.3	4.8	13.9	0.73	2.11	1.4	1.6	0.32	0.37
Ector County (135)	135.0	1.2	4.2	0.89	3.06	-0.6	0.5	-0.50	0.44
Ellis County (139)	148.0	0.2	4.4	0.15	2.95	-0.8	0.4	-0.76	0.34
El Paso County (141)	784.9	14.7	18.8	1.83	2.31	-0.5	2.3	-0.07	0.35
Fort Bend County (157)	579.4	3.2	12.6	0.54	2.15	0.4	1.2	0.10	0.33
Galveston County (167)	287.0	0.4	7.4	0.13	2.56	-0.4	1.0	-0.17	0.40
Grayson County (181)	118.7	-1.0	3.7	-0.82	3.17	-0.2	0.4	-0.19	0.33
Gregg County (183)	117.3	0.4	3.7	0.38	3.15	0.2	0.4	0.21	0.33
Guadalupe County (187)	129.6	-0.4	3.9	-0.30	3.05	-0.3	0.3	-0.37	0.29
Harris County (201)	4,047.9	61.5	60.4	1.50	1.45	17.9	11.6	0.53	0.34
Hays County (209)	150.1	0.6	4.4	0.40	2.93	0.1	0.4	0.11	0.45
Hidalgo County (215)	767.8	44.1	31.3	5.43	3.65	-9.6	3.3	-1.74	0.61

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 142 of 160

			2010			2000				
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard	
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error	
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)	
Jefferson County (245)	236.3	2.4	6.6	1.00	2.73	-0.3	0.8	-0.12	0.35	
Johnson County (251)	148.3	0.0	4.4	-0.02	2.96	-0.6	0.5	-0.51	0.42	
Kaufman County (257)	102.0	0.2	3.3	0.21	3.20	-0.4	0.3	-0.57	0.44	
Lubbock County (303)	267.8	3.6	7.2	1.33	2.63	0.6	1.0	0.27	0.42	
McLennan County (309)	225.8	2.0	6.3	0.86	2.73	0.2	0.8	0.08	0.37	
Midland County (329)	135.2	0.9	4.2	0.67	3.05	-1.0	0.4	-0.88	0.37	
Montgomery County (339)	452.5	0.8	10.5	0.17	2.31	-1.2	1.2	-0.40	0.43	
Nueces County (355)	334.4	3.7	8.8	1.09	2.56	1.2	1.9	0.39	0.60	
Parker County (367)	113.8	-0.2	3.6	-0.17	3.15	-1.0	0.4	-1.15	0.52	
Potter County (375)	114.2	1.5	3.7	1.29	3.16	0.1	0.5	0.12	0.46	
Randall County (381)	118.7	0.4	3.7	0.37	3.13	-0.4	0.3	-0.34	0.33	
Smith County (423)	205.6	0.9	5.8	0.44	2.78	0.1	0.6	0.05	0.34	
Tarrant County (439)	1,788.4	16.8	31.2	0.93	1.71	2.5	4.9	0.18	0.34	
Taylor County (441)	126.2	0.8	4.0	0.63	3.09	0.5	0.4	0.44	0.34	
Tom Green County (451)	105.1	0.7	3.4	0.66	3.22	-0.2	0.4	-0.18	0.36	
Travis County (453)	1,001.2	12.0	19.9	1.18	1.94	1.9	2.6	0.24	0.33	
Webb County (479)	246.8	7.9	7.6	3.09	2.88	0.9	2.8	0.45	1.47	
Wichita County (485)	119.5	0.8	3.8	0.68	3.13	0.1	0.4	0.05	0.33	
Williamson County (491)	417.6	0.2	9.8	0.04	2.34	-0.9	0.7	-0.38	0.30	
Balance of Texas	4,302.1	-12.0	65.2	-0.28	1.52	-18.4	9.8	-0.46	0.25	
Utah (49)	2,717.7	-12.9	38.9	-0.48	1.44	-2.2	9.2	-0.10	0.42	
Cache County (005)	109.1	0.7	3.5	0.66	3.14	0.1	0.6	0.17	0.62	
Davis County (011)	303.2	-1.5	7.6	-0.48	2.53	-1.6	0.9	-0.69	0.38	
Salt Lake County (035)	1,015.6	-3.5	19.6	-0.34	1.94	-2.1	5.9	-0.24	0.67	
Utah County (049)	502.7	-2.6	11.3	-0.53	2.27	-0.4	1.4	-0.12	0.40	
Washington County (053)	136.3	0.0	4.1	0.01	3.03	1.4	0.8	1.60	0.90	
Weber County (057)	228.7	-1.5	6.1	-0.66	2.71	-0.9	0.7	-0.49	0.37	
Balance of Utah	422.2	-4.6	13.0	-1.09	3.14	1.3	1.1	0.37	0.31	
Vermont (50)	600.4	7.9	14.9	1.29	2.43	-6.8	4.3	-1.16	0.75	
Chittenden County (007)	146.8	0.7	4.6	0.44	3.10	-1.0	0.9	-0.75	0.63	
Balance of Vermont	453.7	7.2	15.4	1.56	3.28	-5.7	1.4	-1.29	0.31	
Virginia (51)	7,761.2	44.3	83.4	0.57	1.06	19.5	16.9	0.28	0.25	
Arlington County (013)	204.7	2.9	5.7	1.42	2.70	1.4	0.7	0.76	0.35	
Chesterfield County (041)	311.6	0.9	7.8	0.28	2.48	1.2	0.8	0.48	0.31	
Fairfax County (059)	1,072.4	8.2	20.6	0.76	1.89	2.8	3.6	0.29	0.37	
Henrico County (087)	304.4	1.6	7.6	0.51	2.48	2.1	0.8	0.80	0.29	
Loudoun County (107)	311.1	1.9	7.8	0.61	2.47	-0.1	0.6	-0.06	0.38	
Prince William County (153)	399.5	4.0	9.5	0.99	2.33	0.8	1.1	0.29	0.39	
Spotsylvania County (177)	121.9	0.4	3.8	0.35	3.06	-0.3	0.3	-0.33	0.39	
Stafford County (179)	125.4	0.6	3.8	0.49	3.03	-0.2	0.4	-0.19	0.44	
Alexandria city (510)	138.1	2.6	4.2	1.84	2.92	1.6	0.5	1.28	0.35	
Chesapeake city (550)	218.5	0.8	5.9	0.37	2.68	2.4	0.6	1.22	0.30	
Hampton city (650)	133.0	1.1	4.0	0.85	2.98	1.7	0.4	1.23	0.31	
Newport News city (700)	173.2	1.7	5.0	0.95	2.81	1.9	0.6	1.08	0.31	
Norfolk city (710)	210.0	2.4	5.8	1.15	2.70	3.4	0.7	1.60	0.34	
Richmond city (760)	191.5	3.3	5.5	1.72	2.76	2.1	0.7	1.12	0.35	
Virginia Beach city (810)	428.7	1.0	10.0	0.23	2.32	4.1	1.3	0.98	0.30	
Balance of Virginia	3,417.0	10.8	53.8	0.31	1.56	-5.6	7.8	-0.18	0.25	
Washington (53)	6,585.2	-6.9	75.0	-0.10	1.14	-12.6	26.2	-0.22	0.46	
Benton County (005)	173.8	1.8	5.0	1.00	2.84	-0.2	0.5	-0.13	0.35	
Clark County (011)	422.2	-3.1	9.9	-0.75	2.37	-2.4	1.3	-0.71	0.38	
Cowlitz County (015)	101.2	0.5	3.3	0.53	3.21	-0.5	0.3	-0.57	0.35	
King County (033)	1,894.1	-2.9	32.0	-0.15	1.69	-10.8	8.1	-0.64	0.48	
Kitsap County (035)	242.4	-1.4	6.4	-0.60	2.67	0.1	2.1	0.05	0.92	

Case 8:18-cv-00891-PWG Document 169-9 Filed 01/21/20 Page 143 of 160

			2010				20	00	
	Census	Net	Root Mean	Percent Net	Root Mean	Net	Standard	Percent Net	Standard
	Count	Undercount	Squared Error	Undercount	Squared Error	Undercount	Error	Undercount	Error
State and County (FIPS Code)	(×1000)	(×1000)	(×1000)	(%)	(%)	(×1000)	(×1000)	(%)	(%)
Pierce County (053)	777.3	-4.5	15.9	-0.58	2.07	0.4	6.3	0.06	0.92
Skagit County (057)	115.3	-0.5	3.6	-0.42	3.15	1.2	0.7	1.14	0.65
Snohomish County (061)	702.9	-3.8	14.7	-0.54	2.11	-2.4	4.6	-0.40	0.78
Spokane County (063)	456.5	2.5	10.7	0.53	2.31	-2.6	1.4	-0.66	0.36
Thurston County (067)	248.0	-1.5	6.5	-0.59	2.66	-0.4	1.6	-0.22	0.80
Whatcom County (073)	195.4	1.6	5.5	0.80	2.78	0.2	0.7	0.10	0.42
Yakima County (077)	239.7	4.3	6.5	1.77	2.62	1.7	1.4	0.75	0.64
Balance of Washington	1,016.3	0.2	24.4	0.02	2.40	3.3	2.6	0.37	0.28
West Virginia (54)	1,803.6	-25.5	29.8	-1.43	1.70	-13.1	7.3	-0.75	0.42
Berkeley County (003)	103.3	0.3	3.4	0.27	3.24	-0.2	0.4	-0.27	0.49
Kanawha County (039)	189.9	-1.5	5.4	-0.80	2.88	-2.0	0.6	-1.03	0.31
Balance of West Virginia	1,510.5	-24.3	31.4	-1.63	2.15	-10.9	4.0	-0.74	0.27
Wisconsin (55)	5,536.8	-9.3	66.0	-0.17	1.20	-79.4	11.5	-1.55	0.23
Brown County (009)	241.4	2.6	6.7	1.05	2.71	-2.1	0.6	-0.99	0.30
Dane County (025)	475.3	-3.0	10.8	-0.63	2.31	-2.3	1.2	-0.55	0.30
Fond du Lac County (039)	98.0	0.7	3.2	0.69	3.26	-1.2	0.3	-1.26	0.30
Kenosha County (059)	161.8	-1.6	4.7	-1.01	2.96	-2.8	0.4	-1.94	0.30
La Crosse County (063)	109.4	1.2	3.6	1.05	3.20	-1.3	0.3	-1.32	0.31
Marathon County (073)	132.4	0.9	4.1	0.68	3.06	-1.7	0.4	-1.41	0.31
Milwaukee County (079)	923.2	-4.3	18.5	-0.47	2.02	-9.4	2.4	-1.04	0.26
Outagamie County (087)	173.7	1.3	5.1	0.75	2.88	-1.4	0.5	-0.88	0.30
Racine County (101)	190.4	-1.8	5.3	-0.96	2.83	-3.2	0.4	-1.78	0.24
Rock County (105)	157.4	1.1	4.8	0.71	3.01	-2.0	0.5	-1.33	0.32
Sheboygan County (117)	112.5	0.8	3.6	0.73	3.17	-1.3	0.3	-1.23	0.29
Walworth County (127)	99.5	-1.1	3.2	-1.15	3.33	-1.6	0.2	-1.86	0.29
Washington County (131)	130.7	-1.1	4.0	-0.86	3.08	-1.9	0.3	-1.69	0.25
Waukesha County (133)	384.2	-3.2	9.1	-0.84	2.42	-6.7	0.8	-1.91	0.24
Winnebago County (139)	158.8	1.4	4.8	0.86	2.97	-1.2	0.4	-0.79	0.31
Balance of Wisconsin	1,987.9	-3.1	38.1	-0.16	1.92	-39.4	4.9	-2.13	0.27
Wyoming (56)	549.9	-2.8	12.6	-0.51	2.31	-1.9	3.0	-0.41	0.62

A positive estimate denotes a net undercount and a negative estimate denotes a net overcount.

Estimates are rounded for display.

The 2010 census population count excludes persons in group quarters and persons in Remote Alaska.

"--" Denotes that all the counties in Delaware and Connecticut are listed. Hence, there is no "Balance of State" estimate.

Exhibit 28

FINAL REPORT

2010 Census Integrated Communications Program Evaluation (CICPE)

PRESENTED BY:

Authors: A. Rupa Datta, Ting Yan, Doug Evans, Steven Pedlow, Bruce Spencer, Rene

Bautista

PRESENTED TO:

Donna Souders Federal Project Officer U.S. Bureau of the Census

NORC at the University of Chicago 4350 East West Highway, Suite 800

Bethesda, MD 20814

MARCH 13, 2012



NORC | 2010 Census Integrated Communications Program Evaluation (CICPE)

Table 6-3. Predicting Pre-NRFU Mail Return using Exposure by Sample Type

	Hispanic	Non- Hispanic African American	Non- Hispanic White	American Indian	Asian	Native Hawaiian
Variable	OR (p-value)	OR (p-value)	OR (p-value)	OR (p-value)	OR (p-value)	OR (p-value)
Exposed to Paid Media	1.11 (0.90)	1.30 (0.64)	1.82 (0.40)	0.95 (0.95)	1.59 (0.38)	0.43 (0.18)
Exposed to Partnership	1.36 (0.48)	2.16** (0.01)	1.68 (0.20)	0.43 * (0.07)	1.33 (0.36)	0.92 (0.90)
Exposed to Census in School	1.35 (0.30)	1.44 (0.60)	1.16 (0.85)	1.20 (0.73)	0.78 (0.48)	1.01 (0.98)
Exposed to Earned Media	1.00 (1.00)	1.56 (0.38)	1.13 (0.80)	3.38 ** (<0.01)	1.13 (0.64)	1.62* (0.07)
Exposed to Word of Mouth	0.58 (0.13)	0.30* (0.06)	0.44** (0.05)	1.73 (0.43)	0.54* (0.10)	0.81 (0.50)
Frequency of Total Exposure	0.98 (0.75)	1.10 (0.42)	1.12 (0.16)	1.33** (0.05)	1.24** (0.02)	1.16* (0.07)
Pseudo R-square	0.01	0.06	0.24	0.01	0.01	0.01
Max-Rescaled R-square	0.02	0.11	0.24	0.13	0.04	0.03

2010 CICPE Final Report.

Note: Logistic regression models predicting mail return prior to NRFU (4/18). Wave 3 sample excluding Heavy-up cases. Standard errors corrected for complex survey design. * indicates significance at 0.1 level, ** indicates significance at .05 level.

Again in Table 6-3 we see that different groups respond differently to the campaign. For Hispanics, we see no statistically significant effects for any of the exposure measures, although word of mouth is almost significantly associated with lower mail return. For non-Hispanic African Americans, we see positive partnership and negative word of mouth effects when everything else in the model is held constant. The negative word of mouth result also appears for non-Hispanic Whites. American Indians and Native Hawaiians have positive effects for both earned media exposure and frequency of total exposure, although the coefficients are about one-third the size for the latter group controlling for other variables in the model. American Indians also exhibit a negative partnership effect. Asians seem to have only a positive (increased mail return) response to the total count of ICC exposures and again, a reduced mail return rate associated with having word of mouth exposure.



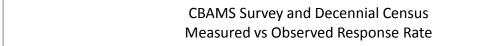
2020 Census Barriers, Attitudes, and Motivators Study (CBAMS) Survey and Focus Groups:

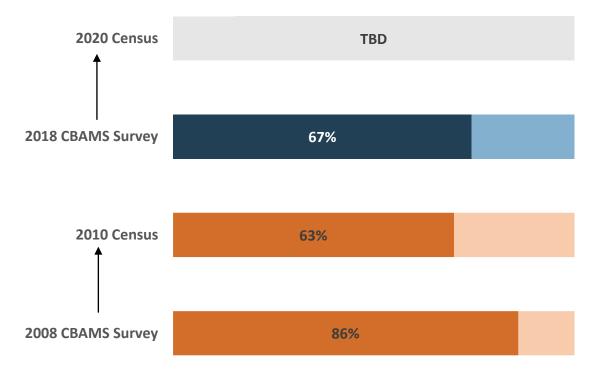
Key Findings for Creative Strategy

October 31, 2018



Only 7 in 10 said they were likely to respond





The mail response rate to the 2010 census was **22.5 pts lower** than measured in the 2008 CBAMS Survey



CBAMS measures those who are "extremely" or "very" likely to fill out the census form if the census were held today





Report to Congressional Requesters

July 2019

2020 CENSUS

Bureau Is Making
Progress Opening
Offices and
Recruiting, but Could
Improve Its Ability to
Evaluate Training

data collection tasks directly from a mobile device allowing them to work remotely. Supervisors will also be able to work remotely from the field and communicate with their staff via these devices—precluding them from needing access to a nearby local office.

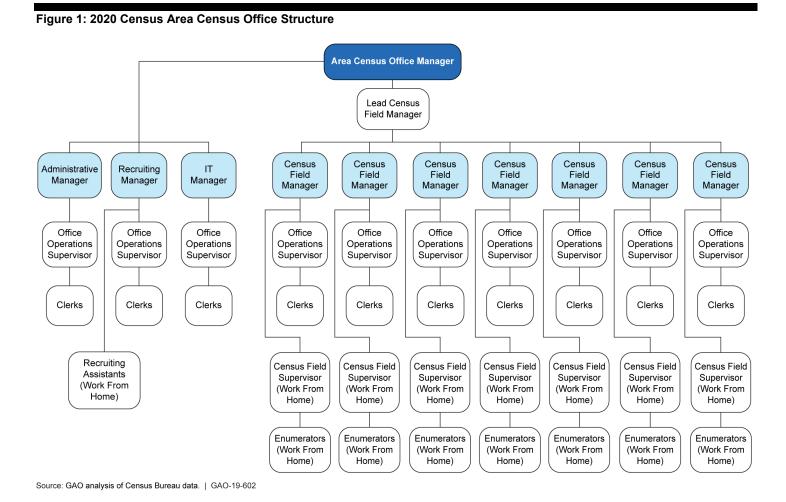
The Bureau's 2020 Operational Plan states that these enhanced capabilities will significantly reduce the number of offices required to support 2020 Census fieldwork. In the 2010 Census, the Bureau established 12 RCCs and nearly 500 ACOs. The new design for the 2020 Census field operations includes six RCCs with 248 ACOs. Those 248 will be split into two waves, with 39 of the offices opening for Wave 1 by March 2019 to support early census operations such as in-field address canvassing, and the remaining 209 opening for Wave 2 by September 2019.

Recruiting and Hiring

Recruiting enough workers to fill the hundreds of thousands of temporary positions needed to conduct the 2020 Census is a tremendous challenge. According to Bureau plans before hiring begins, the Bureau needs to assemble an applicant pool in the millions. For the decennial census, Bureau plans indicate the Bureau will need a large and diverse workforce to ensure the accuracy of its maps and address list, and to follow up by phone or in person with households that do not respond to the questionnaire. Making these efforts even more difficult are external factors beyond the Bureau's control, such as low unemployment rate, which can make it harder to recruit.

According to Bureau plans, recruiting of potential employees will be conducted throughout the ACOs' geographic area, based on projected operational workloads and staffing models developed for 2020 Census operations. Selected candidates will be invited to be fingerprinted and submit selected appointment paperwork prior to attending classroom training. The candidates will be sworn in and hired during the first day of training.

The ACO staff model is as follows: one ACO Manager, one Lead Census Field Manager, one Administrative Manager, one Recruiting Manager, one Information Technology (IT) Manager, and Office Operations Supervisors, Clerks, and Recruiting Assistants. For data collection, it is: multiple Census Field Managers, Census Field Supervisors, and Enumerators; specific numbers based on workload; and supervisory ratios to be determined (see fig. 1).



Training

According to Bureau plans, the 2010 Census approach to training was predominantly instructor-led training with some hands-on training. This primarily consisted of instructors standing in front of a room of trainees and reading training materials to them from a prepared script. For 2020, the Bureau has developed training materials that use a blended training approach including instructor-led training, computer-based training, and hands-on training. This approach is intended to maximize trainee learning and on-the-job performance during the 2020 Census. According to the Bureau's Detailed Operational Plan for the Field Infrastructure and Decennial Logistics Management Operations, it has developed training

PUBLIC LAW 116-6—FEB. 15, 2019

133 STAT. 13

Public Law 116–6 116th Congress

Joint Resolution

Making consolidated appropriations for the fiscal year ending September 30, 2019, and for other purposes.

Feb. 15, 2019 [H.J. Res. 31]

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,

Consolidated Appropriations Act, 2019.

SECTION 1. SHORT TITLE.

This Act may be cited as the "Consolidated Appropriations Act, 2019".

SEC. 2. TABLE OF CONTENTS.

- Sec. 1. Short title.
- Sec. 2. Table of contents.
- Sec. 3. References.
- Sec. 4. Statement of appropriations.
- Sec. 5. Availability of funds.
- Sec. 6. Adjustments to compensation. Sec. 7. Technical correction.

DIVISION A—DEPARTMENT OF HOMELAND SECURITY APPROPRIATIONS ACT, 2019

- Title I—Departmental Management, Operations, Intelligence, and Oversight Title II—Security, Enforcement, and Investigations
- Title III—Protection, Preparedness, Response, and Recovery Title IV—Research, Development, Training, and Services
- Title V—General Provisions

DIVISION B-AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES APPROPRIATIONS ACT, 2019

- Title I—Agricultural Programs
- Title II—Farm Production and Conservation Programs
 Title III—Rural Development Programs
- Title IV—Domestic Food Programs
- Title V—Foreign Assistance and Related Programs
 Title VI—Related Agency and Food and Drug Administration
- Title VII—General Provisions

DIVISION C—COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES APPROPRIATIONS ACT, 2019

- Title I—Department of Commerce
- Title II—Department of Justice Title III—Science

- Title IV—Related Agencies
 Title V—General Provisions

DIVISION D-FINANCIAL SERVICES AND GENERAL GOVERNMENT APPROPRIATIONS ACT, 2019

- Title I—Department of the Treasury
 Title II—Executive Office of the President and Funds Appropriated to the President
 Title III—The Judiciary
- Title IV—District of Columbia

133 STAT. 94

PUBLIC LAW 116-6-FEB. 15, 2019

ECONOMIC AND STATISTICAL ANALYSIS

SALARIES AND EXPENSES

For necessary expenses, as authorized by law, of economic and statistical analysis programs of the Department of Commerce, \$101,000,000, to remain available until September 30, 2020.

BUREAU OF THE CENSUS

CURRENT SURVEYS AND PROGRAMS

For necessary expenses for collecting, compiling, analyzing, preparing, and publishing statistics, provided for by law, \$270,000,000: *Provided*, That, from amounts provided herein, funds may be used for promotion, outreach, and marketing activities.

PERIODIC CENSUSES AND PROGRAMS

(INCLUDING TRANSFER OF FUNDS)

For necessary expenses for collecting, compiling, analyzing, preparing, and publishing statistics for periodic censuses and programs paring, and publishing statistics for periodic censuses and programs provided for by law, \$3,551,388,000, to remain available until September 30, 2021: Provided, That, from amounts provided herein, funds may be used for promotion, outreach, and marketing activities: Provided further, That within the amounts appropriated, \$3,556,000 shall be transferred to the "Office of Inspector General" account for activities associated with carrying out investigations and audity related to the Purson of the Consust Provided further and audits related to the Bureau of the Census: Provided further, That not more than 50 percent of the amounts made available under this heading for information technology related to 2020 census delivery, including the Census Enterprise Data Collection and Processing (CEDCaP) program, may be obligated until the Secretary updates the previous expenditure plan and resubmits to the Committees on Appropriations of the House of Representatives and the Senate a plan for expenditure that: (1) identifies for each CEDCaP project/investment over \$25,000: (A) the functional and performance capabilities to be delivered and the mission benefits to be realized; (B) an updated estimated lifecycle cost, including cumulative expenditures to date by fiscal year, and all revised estimates for development, maintenance, and operations; (C) key milestones to be met; and (D) impacts of cost variances on other Census programs; (2) details for each project/investment: (A) reasons for any cost and schedule variances; and (B) top risks and mitigation strategies; and (3) has been submitted to the Government Accountability Office.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

SALARIES AND EXPENSES

For necessary expenses, as provided for by law, of the National Telecommunications and Information Administration (NTIA), \$39,500,000, of which not to exceed \$15,000,000 shall remain available until September 30, 2020: *Provided*, That, notwithstanding 31 U.S.C. 1535(d), the Secretary of Commerce shall charge Federal

PUBLIC LAW 116-6-FEB. 15, 2019

133 STAT. 95

agencies for costs incurred in spectrum management, analysis, operations, and related services, and such fees shall be retained and used as offsetting collections for costs of such spectrum services, to remain available until expended: *Provided further*, That the Secretary of Commerce is authorized to retain and use as offsetting collections all funds transferred, or previously transferred, from other Government agencies for all costs incurred in telecommunications research, engineering, and related activities by the Institute for Telecommunication Sciences of NTIA, in furtherance of its assigned functions under this paragraph, and such funds received from other Government agencies shall remain available until expended.

PUBLIC TELECOMMUNICATIONS FACILITIES, PLANNING AND CONSTRUCTION

For the administration of prior-year grants, recoveries and unobligated balances of funds previously appropriated are available for the administration of all open grants until their expiration.

UNITED STATES PATENT AND TRADEMARK OFFICE

SALARIES AND EXPENSES

(INCLUDING TRANSFERS OF FUNDS)

For necessary expenses of the United States Patent and Trademark Office (USPTO) provided for by law, including defense of suits instituted against the Under Secretary of Commerce for Intellectual Property and Director of the USPTO, \$3,370,000,000, to remain available until expended: Provided, That the sum herein appropriated from the general fund shall be reduced as offsetting collections of fees and surcharges assessed and collected by the USPTO under any law are received during fiscal year 2019, so as to result in a fiscal year 2019 appropriation from the general fund estimated at \$0: Provided further, That during fiscal year 2019, should the total amount of such offsetting collections be less than \$3,370,000,000 this amount shall be reduced accordingly: Provided further, That any amount received in excess of \$3,370,000,000 in fiscal year 2019 and deposited in the Patent and Trademark Fee Reserve Fund shall remain available until expended: Provided further, That the Director of USPTO shall submit a spending plan to the Committees on Appropriations of the House of Representatives and the Senate for any amounts made available by the preceding proviso and such spending plan shall be treated as a reprogramming under section 505 of this Act and shall not be available for obligation or expenditure except in compliance with the procedures set forth in that section: Provided further, That any amounts reprogrammed in accordance with the preceding proviso shall be transferred to the United States Patent and Trademark Office "Salaries and Expenses" account: Provided further, That from amounts provided herein, not to exceed \$900 shall be made available in fiscal year 2019 for official reception and representation expenses: Provided further, That in fiscal year 2019 from the amounts made available for "Salaries and Expenses" for the USPTO, the amounts necessary to pay (1) the difference between the percentage of basic pay contributed by the USPTO and employees under section 8334(a) of title 5, United States Code,

116TH CONGRESS

1st Session

HOUSE OF REPRESENTATIVES

REPORT 116–9

MAKING FURTHER CONTINUING APPROPRIA-TIONS FOR THE DEPARTMENT OF HOME-LAND SECURITY FOR FISCAL YEAR 2019, AND FOR OTHER PURPOSES

CONFERENCE REPORT

TO ACCOMPANY

H.J. Res. 31



February 13, 2019.—Ordered to be printed

35-014

Income Growth Indicators.—The Bureau of Economic Analysis (BEA) is encouraged to work with the relevant additional agencies to develop and begin reporting on income growth indicators. In these indicators, BEA is encouraged to report at least annually on how incomes grow in each decile of the income distribution, no later than 2020. BEA is encouraged to include the latest available estimates of these measures with each report or update issued by the agency on the Gross Domestic Product of the United States.

BUREAU OF THE CENSUS

The agreement includes \$3,821,388,000 for the Bureau of the Census

CURRENT SURVEYS AND PROGRAMS

The agreement includes \$270,000,000 for the Current Surveys and Programs account of the Bureau of the Census.

PERIODIC CENSUSES AND PROGRAMS

(INCLUDING TRANSFER OF FUNDS)

The agreement includes \$3,551,388,000 for the Periodic Censuses and Programs account of the Bureau of the Census.

In October 2017, the Secretary of Commerce delivered a new life-cycle cost estimate for the 2020 Decennial Census totaling \$15,625,000,000. In addition to reliance on a new independent cost estimate, the Secretary's estimate includes additional assumptions to enhance the robustness and reliability of the program. For example, the new estimate assumes the need for additional in-person follow-up visits due to fewer households expected to initially respond to the Census. In addition, the Census Bureau is directed to provide the Committees with notification 15 days before any spending it intends to incur in fiscal year 2019 that is above the amounts included in the October 2017 life-cycle cost estimate for fiscal year 2019.

2020 Census Partnership and Communications Activities.—The agreement reiterates House and Senate language regarding the Bureau's partnership and communications efforts aimed at maximizing self-response to the 2020 Decennial Census. Additionally, the Bureau shall devote funding to expand targeted communications activities as well as to open local questionnaire assistance centers in hard-to-count communities.

NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

SALARIES AND EXPENSES

The agreement includes \$39,500,000 for the salaries and expenses of the National Telecommunications and Information Administration (NTIA). The agreement provides up to \$7,500,000 to continue the broadband mapping effort started in fiscal year 2018 and adopts Senate report language regarding rural and tribal communities. The agreement modifies Senate language regarding a standardized process, to direct NTIA to work with the Federal